# Bienvenidos Thirty-Seventh Military Librarians Workshop

November 15 - 18, 1993 Albuquerque, New Mexico



# "GLOBAL INFORMATION: THE SUN NEVER SETS"

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PHILLIPS LABORATORY
Directorate of Operations
AIR FORCE MATERIEL COMMAND
KIRTLAND AIR FORCE BASE, NM 87117-5776

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**Project Officer** 

FOR THE COMMANDER

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Director of Operations

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#### **FOREWORD**

The theme for the Thirty-Seventh Annual Military Librarians Workshop was "Global Information: The Sun Never Sets." If you have been cruising along comfortably in your own professional niche, you may be setting yourself up to become a casualty in the battle for business in your libraries. As greater demand develops in various communication areas, professionals in the information field who do not foresee future trends and who do not grow to meet those demands will fall prey to their more alert competitors.

Over the years, we've watched very talented people in the field drop by the wayside because they identified and reacted only to current trends. By the time they had geared up with appropriate marketing strategies for what was happening at the time, the real opportunities had already been consumed by more forward-thinking professionals.

The key to our success as professional librarians, managers, leaders, facilitators, and consultants is to anticipate future directions and to create solid strategies to deal effectively with them--before they become current challenges. We believe we have shown you some steps along the way with the dynamic, up-to-the-minute information that was presented in the workshops.

We would like to thank all who made this 37th Military Librarians Workshop so successful, especially the Phillips Laboratory library staff. Also, a special thanks to the Rio Grande Chapter Special Libraries Association members who brought new meaning to the word "PLANNING." They kept us on track. To Roger Coffin, Phillips Laboratory Engineering Branch, there are not enough ways to say thank you for all of your work in helping us to computerize the registration, the flyers, the invitation letters, the graphics for the program, and the list could go on and on.

Finally, we wish to thank our Commanders for hosting the MLW and all of you who attended the workshop. We especially want to acknowledge the contributions of those whose presentations made "Global Information: The Sun Never Sets" a viable workshop theme.

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#### WELCOME LETTER

Richard W. Davis, Col, USAF Commander Kirtland AFB, New Mexico 15 November 1993

- 1. Welcome to the 37th Annual Military Librarians Workshop. This year's workshop is designed to bring the goal of mission excellence closer to fruition. The theme, "Global Information: The Sun Never Sets," couldn't be more appropriate. While your resources may be reduced, your responsibility to serve your military or public community continues as in the past.
- 2. The Military Library Division continues to look for more and better ways to help you, and this annual workshop is one of the key training opportunities available to enable you to better serve your various and diverse communities.
- 3. Welcome to the Land of Enchantment and have a great conference!

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# TECHNOLOGY, TECHNOPHORIA AND THE GEE WHIZ FACTOR—COMMENTS ON THE FUTURE OF THE INTELLECTUAL MEADOW IN THE NETWORKED, DIGITAL WORLD

Paul H. Mosher University of Pennsylvania 16 November 1993

We are going through a paradigm shift in the generation and transfer of information; a profound transformation in the technology of knowledge. The rate of change appears to be accelerating precipitously--so rapidly that ideas have begun to change faster than the words to describe them, leaving us with a new jargon consisting of approximate or ambiguous meanings that, combined with the rapid technological change itself, makes the progress of the paradigm shift difficult to perceive or describe clearly. Yet we know the changes are significant, and we have been told that the whole passel of changes, taken together, represents a revolution in the media of communication equal in scale and importance to the invention of printing in the fifteenth century, or the invention of the codex book 1400 years before that. It is worth pausing and taking stock, in hopes that we may understand our "revolution" better--both what it is and is not, what it implies and doesn't imply, so that we can act, react and plan appropriately and in a timely way.

The paradigm shift stems from progress in electronic technology, and though it was perceived in the 1960's, it still seems to move its own destiny, and we are forced to choose between being prophets of electronic determinism, or troglodytic Luddites blind to change and opposed to it; enemies of progress and technological amelioration. It is worth distancing ourselves from the change for a short time to reflect on it and its nature; the perspective gained may give us a clearer understanding of what is happening and what our options are.

Our preoccupation with technology arose out of the Age of Reason and the Age of Enlightenment. And this same period saw the birth of our fascination with electricity and its potential for technological change. What did the words technology and electronic mean in the eighteenth century, when the concept of applied technology as a conscious result of empirical research may have originated?

Samuel Johnson's <u>Dictionary</u> of 1755 is a good measure of the meaning of words in the mid-eighteenth century. We find that the word *technology* isn't there. *Technical* meant: "Belonging to arts. Not in common or popular use. In technical

words or terms of art, they refrain not from calling the same substance the sulphur, and sometimes the mercury of the body." The word *electronic* is also absent, but the word *electricity* is: "A property in some bodies, whereby, when rubbed so as to grow warm, they draw little bits of paper, or such like substances, to them."

Such was the account given a few years ago of electricity; but the industry of the present age, first excited by the experiments of Gray, has discovered in electricity a multitude of philosophical wonders. "Bodies electrified by a sphere of glass, turned nimbly round, not only emit flame, but may be fitted with such a quantity of the electrical vapor as, if discharged at once upon a human body, would endanger life. The force of this vapor has hitherto appeared instantaneous, persons at both ends of a long chain appearing to be struck at once. The philosophers are not endeavoring to intercept the strokes of lightening." Who had been reading his Johnson? Benjamin Franklin; and this was the birth of electrical technology, the ancestor of our topic today.

So in 1755, electronic technology hadn't been conceived of. By 1933-34, 180 years later, when the OED first appeared, and Webster's great Second Unabridged Dictionary (also the age of the birth of the card catalog and the union catalog), technology appeared as the practical arts, systematic treatment of a subject, the science or systematic knowledge of the industrial arts, and more significantly: "The means employed to achieve material culture." Technological meant: "Resulting from improvement in technical processes to increase productivity." Electronic came into play in the Second World War with vacuum tube experiments and came to adolescence with the birth of ENIAC, the first "electronic" computer, at the University of Pennsylvania in 1946 (its 50th birthday being planned for celebration at Penn in 1996). Electronics is now well established in the dictionary as "The science dealing with the development and application of devices and systems involving the flow of electrons in a vacuum, in gaseous media, and in semiconductors. Thus "electronic technology."

As I hope you can see, words are important. They convey meaning and content so that we can communicate, transmit ideas, convey understanding.

### Technofallacies and the "Virtual Library" Concept: The Gee-Whiz Factor

Language, literacy, terminology, image and metaphor are important tools for technology, as they are for language. Without them we cannot agree on our vision or goal, and thus cannot reach it.

"Information *explosion*, serials *crisis*, the *virtual* library. An article in the November 15 <u>Business Week</u> tells us that "human knowledge *doubles*, while the

shelf-life of expertise shortens," an "astonishing increase," to ignite this learning explosion," "dramatically altered." This is the language of crisis: dramatic, imperative, immediate, it commands our attention and belief, even as it alters or exaggerates reality.

Technology also contains an immediacy factor; it not only speeds communication, it appears to compress time itself, creating a hyperpresent which appears to contain its own past and future. The pretense of technology is that it is revolutionary and exclusive; that it replaces old technology abruptly and absolutely like new political regimes are supposed to overturn old ones by revolutions. But Daniel Boorstin's *Displacive Fallacy* reminds us that new technology seldom replaces old technology, it layers it or coexists with it, and the old technology may wither and disappear, or it may parallel new technology for a long time, like the auto and the horse, or the telephone, the fax, TV, radio, and movies. We shouldn't forget that it took thirty years, after all, to get the overhead projector from the bowling alley to the boardroom!

Daniel Boorstin also has reminded us that it is vital to remember that the terms information, knowledge, and one may add data, are not synonyms; indeed there are significant differences; if these are not observed, we quickly lose our way in the labyrinth of information technology.

#### Well Then, What Is Technology?

Technology as we know it, is a **modern** idea, and is part of that set of cultural concepts, ideas, and structures we call **modernism**. *Technology* and *Modernism* are closely related concepts. Among the characteristics of modernism is the displacement of people by things, and technology is using objects (things) to do things, using science or scientific principles. Thus recent technology has been driven, among other things by non- or anti-humanistic principles that can put it in conflict with culture and indifferent or opposed to issues or principles of cultural change. An example would be some of the underpinnings of the concept of artificial intelligence, a somewhat loaded and silly-putty term, like so many used in the field of electronic technology. At its most extreme, and not all AI types think this way, the computer is like a human brain, works like a human brain, at its ultimate development can perform functions and tasks of a human brain, may well become an improved, more efficient model of the human brain, leading to the replacement of Homo Sapiens by Machina Sapiens, thus dealing with issues of sexism once and for all.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup>"The Future of Technology in Education, Part I, Re-engineering Schools. An Organizational Theory Perspective."

<sup>&</sup>lt;sup>2</sup>The term "artificial intelligence" reminds me of those supercapacities we used to call into play when we were children when we were backed into a corner during a superheroes game. By invoking a supercharacter's powers (Superman's, Wonder Woman's) we could instantly transcend our human limitations--and often the

Here, metaphor has become simile, simile has become the virtual thing, and the virtual thing is thought to replace the real thing. Whoops, be careful! Look at what language has just done. The mathematical physicist Roger Penrose has demonstrated the primal limit of computers as technology: computers are not minds, and cannot be, physically. They cannot "feel," they cannot "perceive." Computers do not possess "Consciousness."

#### Uses of Electronic Technology: Technology Cannot Be Separated From The Uses To Which It Is Put<sup>4</sup>

In 1967, Marshall McLuhan and Quentin Fiore published a small but influential book, <u>The Medium is the Massage</u>, with a title which was a pun of an earlier McLuhan book, entitled <u>The Medium is the Message</u>. In the earlier book, McLuhan had argued that in modern society, the medium creates its own content: that people pay more attention to the form of information than to its content. "Societies have always been shaped more by the nature of media by which men communicate than by the content of communication," they wrote.<sup>5</sup>

In the 1967 work, the authors went one step further, to suggest that the popular media, having become aware of the power of form, had begun to manipulate the meaning by the form: to manipulate, disinform, and deceive. They alerted the world to the potential distortion of the new mass media.

"Electronic circuitry confers a mythic dimension on our ordinary individual and group actions. Our technology forces us to live mythically, but we continue to think fragmentarily, and on single, separate planes... Myth means putting on the audience, putting on one's environment."

In fact, they were early discoverers of the potential power of electronic media, inherent in electronic technology itself, of causing such fascination with the form of communication or information, that content could be overlooked or neglected.

rules of the game--to win, prevail, or escape. We escaped into metaphorical space, as it were, abrogating the physical world and its limitations. That seems to be the way we often use the metaphors *artificial intelligence* or *technology*.

<sup>&</sup>lt;sup>3</sup>The Emperor's New Mind, Concerning Computers, Minds and the Laws of Physics, London and NY, 1989.

<sup>&</sup>lt;sup>4</sup>Herbert Marcuse, <u>One Dimensional Man</u>, Boston, 1964, p.xvi.

<sup>&</sup>lt;sup>5</sup>The Medium is the Massage, p.8

#### Technology As A Means Of Control For Management In Business, Government, And Education

Technology has often been conceived in terms of power: Shoshana Zuboff's book, In the Age of the Smart Machine (N.Y., 1988), is subtitled, The Future of Work and Power. In his 1972 book, The Applicability of Organizational Sociology, Warren Bennis includes a chapter on Charles Perrow, based chiefly on Perrow's 1967 article entitled: "A framework for the comparative analysis of organizations." Perrow, says Bennis, makes some basic assumptions concerning the relationship of technology and organizations:

Technology is considered the defining characteristic of organizations.

 Technology is an independent variable, and arrangements to get things done are dependent variables.

 Technology is a better basis for comparing organizations than the several schemes that now exist.<sup>7</sup>

James Beneger, in his 1986 book, <u>The Control Revolution</u>; the <u>Technological and Economic Origins of the Information Society</u>, expressed the view that technology provides the means of control within the "information society." In the views of these thinkers, technology is an instrument of control or of power within industry, economic entities, governments, etc. Many of these views are technological updates of the views of Frederick W. Taylor, who wrote of "scientific" management as being characterized by the idea that productivity was a direct result of management's detailed control over labor, and thus over production. Discuss the computer as a replacement for the stopwatch--the ideas of control persisted, but moved into a new technology: that of the computer. For Harold Leavitt, the computer came to be used as a replacement for the stopwatch in the pursuit of an effective technology for control and analysis of productivity.<sup>8</sup>

#### Technology As A Tool For Social Control And Totalitarianism

The powers of electronic technology can be used for good or for ill. Herbert Marcuse posited in <u>Eros and Civilization</u> that technology had evolved to the point that it could release time of workers from dull, redundant, bureaucratic, paper intensive tasks and allow more time for continuing education, self-improvement, and socially productive endeavor. He saw this evolution as being made possible by advances in the newly evolving electronic technology. By the time of the 1966 edition, he rejected his earlier optimism, deciding that humans come to imitate

<sup>&</sup>lt;sup>6</sup>The Applicability of Organizational Sociology, Cambridge, 1972.

<sup>&</sup>lt;sup>7</sup>American Sociological Review, 32 (3) (1967).

<sup>&</sup>lt;sup>8</sup>Harold J. Leavitt, <u>Managerial Psychology</u>, 4th ed. Chicago, 1978, Pp 300-301

the structures, systems, and implied values of their inventions in socially repressive ways and that technological advance was as often repressive and controlling as liberating.<sup>9</sup>

Marcuse and Marshall McLuhan both pointed out the potential contributions of electronic technology--especially as applied to the media--to the growth of totalitarianism. The issue underlying "virtual reality" is **whose** virtual reality. The passive nature of many media applications of technology is another similar concern. A citizen population trained by the media to become couch potatoes, passive and not proactive, could result in profoundly subversive effects on the social principles upon which democracy is based.

#### **Technophoria And Its Discontents**

Phil Baker has written that information overload anxiety is a condition where "the mind reels before the sheer too-muchness of information as it proliferates like junk mail." <sup>10</sup>

A recent op-ed piece in the <u>Economist</u> reported the quandary of the Princeton Library, which had obtained a trove of video reels recording George McGovern's 1972 presidential campaign--on 2 inch (51 mm) videotape. But Princeton, in 1993, no longer possessed a machine capable of playing it, or transferring it to a newer medium. The National Archives, when asked, informed Princeton that they did have such a machine, but that it was in such fragile condition that they would not allow it to be used for fear it would break.<sup>11</sup>

The issue is not just the life span of the videotape (about 20 years), but of the technology that enables its use. What about computer disks or tapes? Magnetic tape has about a 15 year life span before degradation sets in; laser disks more like 20 years. For them, there is yet another dimension of the issue: data files or spreadsheets may not be retrievable without the requisite software programs, since there is no ASC or ANSI standard. And what about e-mail, which increasingly records the decisions, instructions and explanations of administrative life in the United States? What if e-mail becomes multi-media?

"Dreamy technologies dismiss these problems as teething troubles. They foretell a fully digital world where everything can be copied perfectly and data will flow between formats without a hitch, housed in storage media of unimaginable

<sup>&</sup>lt;sup>9</sup>A Philosophical Inquiry Into Freud (1955) [see also One Dimensional Man. Studies in the Ideology of Advanced Industrial Society, Boston, 1964].

<sup>&</sup>lt;sup>10</sup>TLS review of a book by Mark Illis, TLS, September 4, 1992.

<sup>&</sup>lt;sup>11</sup>The Economist, September 18, 1993, p.93

density...Historians of the future may find much to say about the fact that the most thoroughly recorded years in the history of humanity ended up among the least well reserved."<sup>12</sup>

#### **Technofuturism**

There are also "technofuturists" who project the future of society as the future of maximized products of technological change: because technology is capable of it, it not only will come to pass, but should have already--this is a kind of technological determinism beloved of hardware and software manufacturers.

#### **Technopolitics**

The politics of open standards remain Byzantine--perhaps most paradoxically in desktop micros, where it is most important. The division of directions in the UNIX world is a prime example, where IBM, HP, and DEC united to develop their own version of UNIX to keep SUN and AT&T from "gaining control of" the operating system that was initially designed to support open systems design. <sup>13</sup>

#### Technology, Cost, And Cooperation

Do technology and its costs normally save money? This has been the promise of electronic technology since its inception in banks, the airline industry, and government. In fact, the application of electronic technology usually introduces possibilities of increasing functionality and service levels that appear so attractive that *greater*, rather than *lesser*, cost is often the outcome. Part of the new paradigm of electronic technology may be that we are faced with an enormous growth of expectation on the part of our user community which represents an unmanaged cost with sometimes marginal value added. It would be more accurate, with the benefit of hindsight, to say that electronic technology offers greater *opportunity* to manage or control costs, if systems are consciously designed to do so, e.g., when management information components are built into the design phase.

We are also discovering that electronic technology has become a part of our growth culture--that very growth culture that confronts us as we try to cope with steady-state or declining budgets reflecting the sober economic realities of the last decade of the twentieth century. Not only are we confronted by the growth curve of technological obsolescence and the perpetual demand to upgrade, we are faced

<sup>&</sup>lt;sup>12</sup>Ibid.

<sup>&</sup>lt;sup>13</sup>"Computer Confusion. A Jumble of Competing, Conflicting Standards is Chilling the Market," <u>Business Week</u>, June 10, 1991, pp.72-77.

by rising prices for electronic information created by layered costs: the cost of the license (repeated, not one-time), added to the cost of the required software, plus the necessary software, plus the costs of networking. These often add up to a significantly higher price than the paper product they replace.

One would also imagine that the introduction of electronic technology, through its strong suit in communication and interconnectivity, would optimize opportunities for cooperation and collaboration among organizations, and the component parts of organizations. However, although intuition would suggest that electronics should increase networking, intercommunication, integration, and information sharing, Sue Martin has pointed out that libraries have swarmed away from the utility processing that appeared to offer wonderful opportunities for sharing and collaboration in processing toward local systems which make cooperation among libraries more difficult, and she reports one larger library network remarking that "cooperation is an unnatural act." <sup>14</sup>

#### Human Behavior: The Missing Dimension Of Technology

Just as technology cannot be separated from its *uses*, technology cannot be separated from its *users*. Human engineering--ergonomics--must remain a key consideration of technology. If we eliminate the human dimension from technology we will miss the point: technology is not an end in itself, it is a *means* to an end. Technology is the means employed by humans to enhance material culture, hence applied science. Technology is tools; computers are tools. In fact, the promises of electronic technology can only be achieved through thoughtfully assembled and carefully planned alliances--symbiotic alliances, if you will, between humans and technology. Effective alliances between humans and technology, focused on goals and results useful to society, produce the great benefits of electronic technology.

#### The Benefits Of Electronic Technology

Electronic Technology, as a tool, produces its most beneficial results, when it is applied to certain kinds of uses. These can be summarized as:

- Connectivity
- Communication
- Integration
- Interaction
- Flexibility

<sup>&</sup>lt;sup>14</sup> Technology and Cooperation: the Behaviors of Networking, LJ, October 1, 1987, pp.42-44.

Those applications that use more than one of these capacities are most successful and result in the clearest and greatest benefit. The list above has proved useful in planning electronic library services and in evaluating programs and resources based on electronic technology. There is a set of design criteria that I have derived from experience and from the application literature that has proved useful as well:

- Keep it simple, keep it open
- Design for your audience, not for your engineers
- Make work easier and more rewarding
- Improve productivity
- Focus on strategies that add new values or add value in new ways
- Use universal or common standards
- Observe both physical and electronic ergonomic principals

There are other factors, often psychological or social, that play an important part in effective application of any technology. These include such issues as the relationship between technology and personality, feelings, group dynamics, language and communication, and interpersonal relations.

#### Notes On The Post-Electronic Age

Culture creates technology, though it sometimes seems the other way around. As culture calls the imperative of technology into question and as we begin to perceive the limits, as well as the opportunities, of technology more clearly, we will be entering the post-electronic age, in which we will be able to manage the technology more easily, leading it to new, productive uses, rather than feeling driven by it.

As we create the digital information environment--based upon a virtual network-there is a danger that we may act out the prognostications of Marshall McLuhan and worship the medium to the point that it becomes both the message and the massage rather than a tool to carry out more effectively certain functions for which the electronic medium is a superior vehicle. The isomorphic transformation of the electronic tool into a social and isoreligious icon transforms technology into information, data into knowledge, competence into wisdom, means into ends, and transforms value sets (such as democratic principles) in significant and potentially dangerous ways. Among other things, it can lead to division of society, and the world, into information haves and have-nots in ways that are significant and dangerous. We need librarians' cool assessment of technology--its benefits and disadvantages in each application. We are the students of information: its nature, generation, production, distribution, and consumption. We must work in partnership with technologists and engineers so that the nature and useful applications of technology are remembered and understood. Only librarians can help prevent the techno-babel that threatens to overwhelm our future.

#### Rights, Revenues, And The Control Of The Data Superhighway

- Did you know that 40% of the world's population has no access to electricity?
- That 65% have never placed a phone call?

The nature of the evolution of Cyberculture has meant that it was led in the first place by engineers and technologists and secondly by investors and economic interests. Not surprisingly, the first of these groups was utopian and altruistic. The second has searched for profit and had strongly suggested that economic or market principles should define the nature of rights within the developing electronic environment. The current administration in Washington appears to have bought the economic determination of the profit sector, only dimly perceiving the open-market, research-based, free exchange, altruistic principles of the initial designers of the new information environment. So there is a move of information responsibility and support from NSF and Education to Commerce. Nor has the present administration yet conceived of the need for leadership in the information arena, where public, education, research, and communication interests must be balanced with economic or commercial interests.

The playing field is that of rights, and so far there has been too little recognition that the concept of rights has its primary base in law--with the U.S. Constitution as the bedrock, and with a house built of statutory law on that base. We have too long left the definition of rights to the presumed claimants to those rights, rather than understanding the legal basis of information or copy rights.

Technology is a tool; a tool to be used by humans for socially and culturally desirable ends. Technology is a tool of people, by people, and for people. It is up to each of us to accept responsibility within our organization for this mission. Human engineering and human responsibility are essential to the planning and application of good technology. In this process, human networking is as important as electronic networking. If technology is the uses to which it is put, what will those uses be?

# NEW APPROACHES TO EDUCATION AND TRAINING OF INFORMATION PROFESSIONALS— U.S. VERSUS EASTERN EUROPE

José-Marie Griffiths
Director, Center for Information Studies
University of Tennessee, Knoxville

#### 1. General Library Environment in Eastern Europe

It is difficult to compare library and information science education in Eastern Europe and United States without first considering the environment in which libraries operate in these two very different parts of the world. One of the most striking differences between libraries in each region is that libraries in Eastern Europe are mostly closed access. Access is closed physically in that stacks are not generally open to users, with the exception of small reading rooms for reference materials. Intellectual access is also limited in that most libraries provide access only through author and title catalogs. Subject catalogs, when they do exist, are usually for librarian use only. Furthermore, the subject catalogs that do exist tend to use in-house developed subject headings and are not necessarily easily adaptable for shared cataloging systems.

Libraries in Eastern Europe use some automation although applications are fairly limited and reflect the state of library automation in the United States about twenty years ago. Applications include catalog card production (for a single library or a central library with branches), production of national bibliographies, production of abstracts and indexes for specific subject bibliographies, production of lists of foreign language material, and database searching.

Recently, libraries in Eastern Europe have started to implement integrated library systems (imported from Europe and the United States and usually funded by foreign foundations). CD-ROM databases are also emerging as a format of choice and Internet access is available from major cities. During a recent visit to Warsaw, a long-distance telephone call took six hours for a connection; meanwhile, I was able to connect from the Warsaw University to the University of Tennessee via the Internet in less than two minutes.

The administrative environment in Eastern Europe libraries is different from that in Western countries. The environment has been extremely rigid and highly

centralized. Library directors were generally political appointees and librarians were expected to take orders from above. This climate tended to suppress any innovative or creative spirit among librarians and encouraged little sense of user orientation.

The above points all describe the overall environment within which Eastern European libraries operate and are not necessarily indicative of all libraries. Pockets of innovation and user orientation certainly exist but they tend to be the exceptions rather than the norm. Many senior-level Eastern European librarians have visited libraries in Western Europe and/or North America and are aware of the user-oriented models that exist. However, the changes that need to occur in their infrastructures are daunting and it is difficult for librarians to know where to begin.

#### 2. Eastern European Model for Library and Information Science Education

The Eastern European model of library and information science education is based on the Soviet model and contains four distinct levels: library technicum, library institutes, postgraduate library education and library education for subject specialists. Each level is described briefly below, but more information can be found in Raymond.<sup>1</sup>

#### a. Library Technicums

The library technicums offer a three-year program for those who have not completed 10 years of high school. These programs are similar to the library technician programs in community colleges. The programs include both general education as well as specific library and bibliographic training. The focus of these programs is on basic skills to perform library functions and is more practical than theoretical. Graduates are able to run village, collective farm, or trade union libraries and departments in city libraries. There is some evidence that many libraries find graduates of the technicums to be more "useful" than graduates of the higher level institutes.<sup>2</sup>

#### b. Library Institutes

The library institutes offer a four-year program for those who have graduated from 10 years of high school. Students must also pass exams in history of the country, literature of the country, language of the country,

<sup>&</sup>lt;sup>1</sup>Raymond, Boris, "Russian Education for Library and Information Service," <u>Canadian Library Journal</u>, vol. 48, no. 6, December 1991.

<sup>&</sup>lt;sup>2</sup>Cheriak, A. la, "Gumanitarii ili ...?," <u>Bibliotekar</u>, no. 6, 1986, cited in Raymond (1991).

and another foreign language as an entrance requirement. The program is split roughly equally between general education and specialized courses. The specialized courses include general librarianship, bibliography, principles of popular education, history of librarianship, history of the book, children's literature, and specialized subject bibliography. Generally, the institute programs place more emphasis on history and theory than the technicums which focus on hands-on work. Graduates of the institute programs have the equivalent of a baccalaureate degree.

Both technicum and library institute graduates are required to do three years of postgraduate practical work in an assigned library before their education is considered complete.

#### c. Postgraduate Library Education

Candidates for the doctoral level degree programs must have graduated from an institute program and have completed the three-year postgraduate practical experience. They are required to take classes in education as well as librarianship and information science and they must pass exams in a foreign language, Marxist philosophy, and their field of specialization (either library science or bibliography/information science). Note that the requirement for Marxist philosophy which ran through all levels of education in Eastern Europe has now been dropped. Furthermore, the predominant foreign language for the non-Soviet countries was Russian. Today, there is a preference for other languages - German, English, French, etc.

#### d. Library Education for Subject Specialists

Subject specialists (linguists, historian, scientists, etc.) who are employed in libraries, but who do not have a library education, are required to take library science extension courses.

Today, library and information science education in Eastern Europe is differentiated, not by type of library, but by subject areas of literature and by type of internal library function.

#### 3. Examples of Curricula

To demonstrate the scope of degree programs in library and information science programs in Eastern Europe, let us consider the undergraduate degree program offered by the Department of Library and Information Science at Charles University in Prague. The program includes a core curriculum and possible specialization in three areas: scientific information, librarianship, and bibliology.

Note that most courses are required - a major difference between programs in Eastern Europe and the United States.

#### 1. Core Curriculum

#### 1.1 Social Science Background

#### Required Courses

History of Philosophy Methodology of Science Logic Social Psychology Economics

#### **Elective Courses**

Sociology Psychology Education Aesthetics General History

#### 1.2 Library and Information Science Background

#### Required Courses

Microcomputer Operations Speed Reading and Introductory Course Introduction to Research Social Information Social Communication Information Technology Science of Documents Retrieval Languages - Theoretical Foundations Information Analysis of Documents Identification and Description of Documents Information Ordering and Retrieval Languages Construction and Organization of Information Files Theoretical Foundations of Information Systems **Document-Based Information Systems** Bibliographic Information Systems Data-Based (Factual) Information Systems Design of Information Systems

Organization and Construction of Databases Applications of Computer, Telecommunications, and Reprographic Technology Seminar Practical Training

- 1.3 Languages (courses are required in three world-wide languages)
- 2. Specializations
- 2.1 Scientific Information

Required Courses

Quantitative Methods
Information Provision for Science, Technology, and the Economy
Information Services and User Training
Information Retrieval
Design, Operation, and Exploitation of Computerized Data
Systems (Fact-Based)
Synthesis and Evaluation of Information

**Elective Courses** 

Four courses from the electives list - see end of curriculum

#### 2.2 Librarianship

Required Courses

Organization and Management Library and Bibliographic Services and User Training Comparative Librarianship Bibliopedagogy History of the Book and Librarianship Sociology of Literature

**Elective Courses** 

Four courses from the electives list - see end of curriculum

#### 2.3 Bibliology

Required Courses

Introduction to the Study of Bibliography
Paleography
Codicology
Typology of Printed Books
History of Czech and European Book Printing Until
the 19th Century
History of Libraries
History of Earlier Czech Literature
Foundation of Christian Culture
Genealogy and Heraldry

**Elective Courses** 

Two courses from the electives list - see below

#### Electives for all Specializations

Mathematical Linguistics and Machine Translation Theory and Practice of Contemporary Information Activities Fundamentals of Mathematical Logic Fundamentals of Marketing **Expert System Software** Information and Society Personal Documentation for Scientists Standards and Patent Information Readers' Psychology Sociology of Reading Literature for Children Methodology of Working with Children and Youth Aesthetics Contemporary Czech and Slovak Literature Booksellers and Publishing Rare Books of the 19th and 20th Century

#### 4. Educational Needs in Eastern Europe

In spite of the seeming comprehensiveness of the four-year undergraduate program, there are some clear gaps in the educational programs currently offered. They include more practical aspects of the following topics:

Automation and technology - more hands-on experience Business and financial management Planning and implementing plans using participatory approaches Research methods and statistics

#### Standards development Collaborative work

## 5. Concerns With Library and Information Science Education in Eastern Europe

The literature contains references to several areas of concern with library and information science education in Eastern Europe. What is interesting about these expressed concerns is that they are similar to concerns raised in the United States as well. The concerns include:

- Students lack a sufficiently broad educational background in the United States the concern is that library and information science programs do not attract enough students with specialized backgrounds, while it is also argued that a broad liberal arts background is the best qualification for entry into programs.
- A university-level education is a necessity for librarians working in technical and academic libraries - in the United States that accredited master's degree is considered the entry level qualification for librarians, although many public and school libraries hire individuals with lesser qualifications.
- The quality of faculty in smaller institutes and the extension programs is of concern - similar concerns have been expressed in the United States, particularly the lack of research activities by faculty in smaller schools and the extensive use of adjunct faculty for some extension programs.
- In four-year institutes it is impossible to teach all subjects in the curriculum adequately in the United States there are concerns that a one to one-and-a-half year program is insufficient for all that needs to be covered.
- Graduates leave the profession for better paying, more prestigious jobs - a long-term concern in the United States.
- Library education is still primarily oriented towards public and children's librarians - in the United States there is concern that much of the education is geared to public and academic librarianship.

#### 6. Library and Information Science Education in the United States

In the United States there are two levels of schools with programs of library and information science accredited by the American Library Association's (ALA) Committee on Accreditation (COA). The first level includes schools with a doctoral program and the second includes schools without a doctoral program. The reason I use this breakdown is because the former group generally is larger schools with full-time faculties of 15-35; the latter group has faculty sizes of 6-10. All of the schools have Master's degree programs (the programs that are accredited by COA), and some also have undergraduate programs. The Master's degree programs nearly all take one year or four semesters of full time study, although over half of the students are enrolled on a part-time basis.

Generally, programs of library and information science education in the United States moved away from or minimized their core curricula. As indicated earlier, they aim to attract students with broad liberal arts backgrounds. The programs are intended to educate their graduates to work in all functions in all environments and there is a general trend away from on-the-job skills towards principles and methods. Finally, there is an increasing demand for continuing education at all levels.

### 7. Current Developments and Trends in Library and Information Science Education in the United States

I perceive a trend towards significant growth of three main functions for librarians and information specialists. Note that none of these is a new role but they are likely to gain in prominence for all in our profession. The first function is information representation which involves the classification, cataloging, indexing, abstracting, and other forms of information description to facilitate identification, access, and retrieval of that information in today's environment of proliferating information resources. One of the major challenges of networked information is finding appropriate resources on the network and then being able to use them effectively and efficiently. The second function is the increasing need for information analysis and synthesis. This function is related to the first function and responds to problems in information overload on the part of information users. To a large extent we are still dealing with the myth of end-user searching. Instead, it appears that end-users will perform relatively simple searches themselves, but will return to the librarian as intermediary for their more complex information needs, thereby increasing the librarian's workload. Increasingly, end-users will delegate more of their information gathering activity to an information professional, including the filtering and synthesis of information from various sources. This function is growing in many organizations as librarians and information specialists are appointed to work on user teams and work groups. The third function is that of user education and training. It is

difficult to envision a future which does not require more attention to giving users the knowledge and skills to recognize and use various information resources, when to use them, and when to seek the help of an intermediary.

In response to these expanded functions, library and information science education is considering the following options:

- the move towards the provisions of "specializations/concentrations" in their programs which may evolve into separate degree programs
- the expansion of recruitment efforts to attract students with specialist degrees in addition to those with broad liberal arts degrees
- move back towards core curricula, lock-step programs, etc.
- more emphasis on information management and information systems to enhance recruitment and placement
- more interdisciplinary programs to leverage resources and increase centrality to institutional missions

The consideration of such programmatic changes creates an opportunity for a definition of the unique aspects of the discipline of library and information science. Recent discussions of several deans of library and information science schools resulted in the identification of the three main components of the discipline:

- actual and potential users and their information needs
- information resources
- technologies of the day and those that have gone before

The discipline of library and information science can then be defined as the intersection of all three components. Other disciplines touch on one or more of the components, but library and information science touches on all three. One other component reinforces our discipline in a unique way - the system of values that the discipline promotes - strong service and user orientations, intellectual freedom, equity of access, etc. Together these four components define our discipline and core curricula should be based on them.

This approach has been implemented at the University of Tennessee. A new proposed core curriculum includes:

The Information Environment: The generation, production, management, dissemination, and use of information; including roles of information in society; information seeking and user behavior; the information industry; economics of information products and services; technological and organizational change; the information professions; issues (policy, ethics, privacy, intellectual property, intellectual freedom, copyright).

**Foundations of Information Sciences and Technologies:** Definitions of information, information sciences and information technology; theories of information, information representation, retrieval, and transfer; standards and technologies for information processing and distribution; the research front; bibliometrics and infometrics; relationships with other disciplines.

**Information Resource Selection, Acquisition, and Evaluation:** Principles of development and management of collections in information agencies; community analysis; users and uses; policies and procedures; evaluation of items and collections; selecting items to meet particular needs.

**Information Content Representation:** Principles of distinguishing, describing, and indexing intellectual works; current approaches, including citation systems, descriptive cataloging, non-subject indexing, pre- and post-coordinate subject indexing, classification and categorization, authority control of index terms, and standards.

**Information Access and Retrieval:** Media for information storage, logical and physical information structures, query logic and languages, search strategies and heuristics, user interfaces, evaluation of retrieval system performance, searching various types of database (multi-media, full-text, numeric, bibliographic, etc.) on behalf of clients.

After completion of the core curriculum, students have the choice of a wide range of elective courses, or they can opt for one of the concentrations offered which requires a certain combination of courses be taken. The concentrations currently planned for Fall Semester 1994 are:

- Scientific and Technical Information
- Information Systems and Technology
- Youth Services in Public and School Libraries

The program has been further developed to incorporate lab sections for several courses, internship, and practicum opportunities, and a career development seminar series is offered throughout the year (non-credit).

Finally, continuing education programs are needed at all professional levels: paraprofessional/technician level, professional librarian level and library director level. While schools of library and information science have been criticized for their relatively minimal role in continuing education, the demands are increasing so rapidly that cooperative efforts by several agencies will be needed. Distance education technologies (fully interactive voice, video and data communications via land lines, or one way video and interactive voice and data via satellite) will help specific programs to achieve the critical mass needed to recover costs. However, to be most effective, continuing education programs need to be planned and sequenced over a reasonable period of time, e.g., three years. This will overcome the problems associated with the ad hoc availability of programs today - you take what you can get when you can get it but the discrete units do not necessarily add up to a whole.

In summary, the Eastern European programs seek to become more practical in nature while the U.S. programs continue to move towards core principles and transferrable competencies. The time is right for a re-examination of the whole educational process; what are programs trying to do, what is needed and what should programs aim to do, and how can programs be structured and delivered most effectively. It is clear that change is a constant companion for all of us and the educational sector needs to respond proactively to the challenges of the future information environment.

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#### FEDLINK UPDATE

Joseph W. Price
Acting Director
The Federal Library and Information Center Committee
Library of Congress, Washington, DC

Looking to the future during fiscal year 1993, the Federal Library and Information Center Committee (FLICC) streamlined its organizational structure, promoted forward-looking initiatives in automation and networking on behalf of the nation's federal libraries and information center, and sponsored programs that helped define the emerging role of federal librarians and improve the management of federal libraries. FLICC's network arm, FEDLINK, sharply improved its fiscal operations while offering expanded and enhanced FEDLINK training programs both locally and regionally. In FY 1993, the FEDLINK procurement program provided discounts and contract cost avoidance benefits that saved the federal government more than \$12 million.

Organizational strides and administrative changes marked FY 1993. FLICC worked with Library of Congress (LC) units on a draft reorganization plan submitted in July and continued to finalize the plan through the end of 1993. FLICC welcomed Joseph Price, chief of LC's Science and Technology division, as acting FLICC director and Joseph Banks, FEDLINK business manager, as acting FEDLINK director, working with Milton McGee, FEDLINK Network Operations (FNO) coordinator, and Lee Power, FLICC chief program analyst, in a consultative approach to ongoing management of the organization.

The FLICC Personnel Working Group played a major role in advising and assisting the Office of Personnel Management (OPM) in developing OPM's draft classification standards for the GS-1410 Librarian Series, GS-1411 Library Technician Series, and GS-1412 Technical Information Specialist Series. The FLICC Statistics Working Group, in concert with the National Center for Education Statistics (NCES), continued to develop the nationwide survey of federal libraries and information centers to update 1978 statistics. The FLICC Binding Working Group continued to provide input to the new Government Printing Office (GPO) federal binding contract, which it helped shape, and to acquaint federal libraries with contract provisions and binding personnel.

During FY 1993 FLICC promoted the evolving role of federal librarians in meeting government's changing information needs and the administration's desire to "reinvent government." Key FLICC events spotlighted the challenges facing the

federal library and information center community: the 1993 Annual FLICC Forum on Federal Information Policies, "Government's Role in the Electronic Information Era: User Needs and Government's Response," and a special forum devoted to "Federal Librarians in the 21st Century; Changing Roles in the Electronic Age."

#### **FLICC Quarterly Membership Meetings**

At the first FLICC Quarterly Membership Meeting held on December 10, 1992, FLICC members were briefed on GOP's Library Programs Service and Office and Electronic Information Dissemination Services by Judith Russell, GPO. The second FLICC Quarterly Meeting held on February 22, 1993, featured a preview of the 103rd Congress Agenda by Harold Relyea, LC Congressional Research Service. At the June 3 FLICC Quarterly Membership Meeting Sara C. Jones, Joint Committee on Printing, reviewed the GPO Electronic Information Access Enhancement Act of 1993 (S. 564), and Roxanne Williams, Agriculture Department, discussed the Draft Policy Framework for Public Access to Government Information. During the September 23 FLICC Quarterly Membership Meeting the following public access topics were presented: Inventory Locator, Timothy Gauslin, U.S. Geological Survey; OMB Circular A-130 Implementation, Peter Weiss, OMB; and the Z39.50 Standard for Information Retrieval, Ray Decemberg, LC. Members also received updates on OPM's Librarian Classification Standards by Jean Stewart, OPM, and activities of the White House Conference on Library and Information Services Task Force (WHCLIST) by Dorea Grimes, National Oceanic and Atmospheric Administration, federal library delegate, and Davis McCarn, user representative for federal librarians.

#### **FLICC Working Groups**

FLICC Binding Working Group: The FLICC Binding Working Group worked closely with the new GPO contract binder, selected in August 1992, to ensure satisfactory service to federal libraries. At the behest of the group, GPO's Term Contracts Division and Quality Assurance Division directed the binder to take corrective action when problems arose. The group also succeeded in getting GOP to modify the binding contract so that volumes needing corrections could be returned directly to the binder and in developing the GOP Form "Notice of Quality Defects in Library Binding" to support this arrangement.

FLICC Education Working Group: The FLICC Education Working group planned and organized programs on the use of Internet, strategic planning, space planning, user satisfaction, imaging technologies, issues and advances related to the binding of books, and total quality management. The popular "Orientation to LC Collections and Services for Federal Libraries" series was continued in FY

1993, as was the highly successful "Great Escapes" series hosted at various federal libraries in the metropolitan DC area.

FLICC Federal Depository Libraries Working Group: The FLICC Federal Depository Library Working Group was established in the Spring of 1993 in response to funding problems and proposed cuts in the GOP Federal Depository Library Program (FDLP). During May the members toured GOP's distribution and cataloging facility and discussed the future of federal libraries in the FDLP with GPO officials. The group also alerted federal libraries to restructuring and financial concerns of GPO.

FLICC Federal Law Librarians: During FY 1993 FLICC continued the dialogue on redescribing and clarifying the relationship between FLICC and the Federal Law Librarians.

FLICC Finance Working Group: The FLICC Finance Working Group held numerous sessions to develop the FY 1994 FLICC budget and reported to members that increasing program costs and lower service dollar projection for FY 1994 necessitated an increase in FEDLINK fees and a major effort to secure network customers. Members approved changes in the FEDLINK fee structure that increased the transfer pay fee from 6.75% to 8% and established a two-level direct pay structure providing that members with orders up to \$25,000 pay a flat fee of \$850 per service account and members with orders over \$25,000 pay an additional 1/2% of service dollars over \$25,000.

FLICC Membership and Governance Working Group: During FY 1993 the FLICC Membership and Governance Working Group remained on standby to advise FLICC on the Selection and eligibility of FLICC members and interpretation of the FLICC Bylaws.

FLICC Nominating Working Group: The FLICC Nominating Working Group oversaw FLICC's annual three-phase election process under the FLICC Bylaws.

FLICC Personnel Working Group: The FLICC Personnel Working Group continued to coordinate with FLICC members, OPM, and interested library professionals and associations to achieve revised classification standards for the GS-1410 (Librarian), GS-1411 (Library Technician), and GS-1412 (Technical Information Specialist) series. OPM's release of classification standards for the 1411 series in August incorporated several changes in response to FLICC's suggestions. But at the end of FY 1993 all of OPM classification projects were placed on hold indefinitely.

FLICC Policy Working Group: The Policy Working Group prepared a comparison of the revised OMB Circular A-130 with comments that FLICC had made previously to OMB on the proposed A-130 draft, and established a tracking system to monitor several bills significant to FLICC.

FLICC Preservation Working Group: During FY 1993 the FLICC Preservation Working Group forcefully articulated the status and importance of preservation in federal libraries and archives, supported continuing education initiatives to assist federal libraries and information centers in meeting challenges associated with effective preservation programs, developed a checklist of preservation procedures for libraries, and sponsored a presentation in September at the Smithsonian Institution on preservation programs in Kiev, St. Petersburg, and Budapest depositories.

FLICC Reference/Public Services Working Group: Reconstituted in FY 1993 to reflect an expanding mission in circulation, interlibrary loan (ILL), and new technology, the FLICC Reference/Public Services Working Group presented a demonstration of Housing and Urban Development's Conquest Retrieval Program in August, suggested alterations to existing Interlibrary Loan Request Form, LC SF-162, to reflect current technology and provide increased information for both borrowing and lending libraries, and focused on the need for developing a federal-employee "pathfinder" to communicate different agency rules governing facility and library access.

FLICC Statistics Working Group: Organized in FY 1991 to update 1978 federal library statistics prepared by FLICC (then known as the Federal Library Committee), the FLICC Statistics Working Group mailed a survey pretest in September to nearly 300 federal library and information centers, developed a definition of "information centers" to be fine-tuned in the pretest, and minimized the potential that survey data could be used to support the privatization of federal libraries.

#### **FLICC Publications and Education**

In FY 1993 the FLICC Publications and Education office (FPE) continued to provide communications and education outreach to the federal library and information center community by issuing FLICC and FEDLINK publications and administrative reports, organizing educational events and technical programs, coordinating more than 50 meetings of the FLICC working groups, and providing logistical, program development, and organizational support for quarterly

meetings of FLICC's membership and bimonthly meetings of the FLICC Executive Board.

FPE produced FEDLINK Technical Notes monthly from October 1992 through April 1993 and bimonthly for the remainder of the fiscal year, issued the FLICC Education and FEDLINK Training Calendar during the interim months, and published four issues of the quarterly FLICC Newsletter. FPE's annual publications included the 1993 Directory of FLICC Members and Working Groups, the FY 1993 FEDLINK Services Directory, and the FY 1994 FEDLINK Registration Package. FPE compressed the publication cycle of the summaries and papers of two annual FLICC Forums to assure more timely release, producing the 1992 Forum summary and papers in January 1993, followed nine months later by the 1993 Forum summary and papers. FPE produced FY 1993 FLICC management reports including FLICC monthly, quarterly, and annual reports, as well as minutes for FLICC Quarterly Membership Meetings and bimonthly FEB meetings.

In conjunction with the FLICC Education Working Group, FLICC offered 12 all-day educational programs in FY 1993 geared to helping federal libraries and information centers manage change. The programs focused on the impact of developing information technologies and services on the library world and the role of federal librarians, as well as the challenge of managing federal libraries in such an environment.

#### FEDLINK (Federal Library and Information Network)

In FY 1993, 982 federal agencies received cost effective access to an array of automated information retrieval services for on-line research, cataloging, and interlibrary loan through FEDLINK. Member federal agencies also procured publications, serials, and books through FEDLINK in FY 1993 via LC/FEDLINK contracts with major vendors.

During FY 1993, the FEDLINK Advisory Council (FAC) established a FAC Marketing Task Force to advise and assist FEDLINK with marketing efforts designed to reach a broader segment of the federal community in an effort to increase FEDLINK's customer base. FEDLINK's Internet Planning Group (IPG) continued to explore FEDLINK's role in introducing and informing federal libraries about Internet.

#### **FEDLINK Network Operations**

During FY 1993, FEDLINK Network Operations (FNO) functioned as the regional library network for 825 Online Computer Library Center (OCLC) member federal

libraries. FNO conducted 125 training events in the DC area and nationally and provided daily technical and program support to all federal libraries and information centers. FNO staff prepared solicitations and other required contract documents for LC Contracts and Logistics Services (C&L) in support of the FEDLINK procurement program for information products and services; served on Technical Evaluation Review Panels (TERPs) to evaluate vendors' responses; and served as the Contract Officer Technical Representatives (COTRs) for the awarded FEDLINK contracts.

#### **OCLC Network Activity**

During the first quarter of FY 1993, FEDLINK network librarians implemented the OCLC PRISM ILL migration plan begun in 1992. This national training program prepared more than 500 OCLC Interlibrary Loan system users for transition to the new PRISM ILL environment in December 1992. In the second quarter, OCLC continued expansion of its Reference Services products, EPIC and Firstsearch, which generated member interest and an increased demand for user support. As an increasing number of members developed local systems, FNO provided expert support in local database creation through OCLC MARC tapes and other MARC services. FNO prepared the membership for cancellation of the FEDLINK network archival tape known as the FLC tape effective July 1, 1993. In the third quarter, when OCLC announced keyword access to the Online Union Catalog, FEDLINK recognized the need to promote strategic and cost effective searching in a more complex searching environment and offered four new searching courses in FY 1993: PRISM Searching Overview, Advanced PRISM Searching, PRISM Searching for Cataloging, PRISM Searching for Interlibrary Lending.

#### **FEDLINK Training**

In FY 1993 FEDLINK staff conducted 108 OCLC classes and 17 Internet classes. Nearly one-half of FEDLINK's 1,502 FY 1993 students received training outside the DC metropolitan area. FEDLINK conducted regional and on-site training locations in Alaska, Arkansas, Arizona, California, Colorado, Louisiana, Maryland, New Mexico, Ohio, Texas, Virginia, and Washington, and national OCLC training programs for the Army Corps of Engineers in Alabama and for the Air Force in Louisiana. FEDLINK's OCLC Training Agreements with five OCLC Regional Support Networks provided additional training options to FEDLINK members.

#### FEDLINK OCLC Member Activity

FEDLINK OCLC members during the reporting period July 1992-June 1993 showed slightly less OCLC on-line activity than the same period in 1992, although

usage was slightly higher than the comparable 1991 period. Total interlibrary lending requests and referrals dropped from 312,195 to 303,362, a decrease of 2.8%. Total union list holdings displays rose from 26,778 in 1992 to 43,800 in 1993, a 63.6% increase, while other On Line Union Catalog (OLUC) holdings displays decreased from 586,236 in 1992 to 560,779 in 1993. Activity on the OCLC Online Cataloging system decreased from 1992 but approximated prior years' usage. One indicator was that total master records created by FEDLINK libraries in 1993 dropped 14,885 from 77,833 in 1992 to 66,335 in 1993, master records created by FEDLINK libraries in 1993 dropped 14.88% from 77,833 in 1992 to 66,335 in 1993. This was a decrease from the previous year, but only slightly lower than 1991, when FEDLINK members created 66,925 OLUC records. Activity on OCLC Reference Products continued upward with total EPIC OLUC per record displays (including both on-line and off-line charges) increased to 101,705 in 1993, a 6.9% increase over 1992 activity.

### Library Automation Resource Service (LARS)

Through LARS, FNO offered expert counsel to federal libraries in the application of automation and telecommunications in their library environment. In FY 1993, LARS continued to focus on introducing Internet to federal librarians through briefings held at the Defense Technical Information Center Annual Users Group Meeting, Alaska Resources Library, U.S. Circuit Court, Department of Labor Library, National Aeronautics and Space Administration, and Denver Federal Service Center. FNO continued to respond to inquiries, conduct Internet demonstrations, create documents, and implement a collection of downloadable files for federal libraries on the LC Sequent computer.

When LC unveiled Marvel to the Internet world in July, FEDLINK launched an Internet training program comprising Internet Demonstrations, half-day Internet Overviews, and two-day Internet Workshops. During FY 1993, development of the FEDLINK ALIX electronic bulletin board continued. Access to, and visibility of, ALIX increased in 1993 when the NTIS FEDWORLD bulletin board gateway added ALIX to its more than 100 bulletin boards. Internet access to FEDWORLD made ALIX available worldwide in FY 1993. LARS also initiated the use of the OCLC PASSPORT Software by the Patent and Trademark Depository Library Program for access to FTS 2000 E-mail.

### **FEDLINK Procurement Program**

FEDLINK analyzed the discounts offered through LC/FEDLINK basic ordering agreements (BOAs) and typical contracting costs for information procurements to assess the cost effectiveness of the FEDLINK procurement vehicle. A brief review

of FY 1992 invoices suggested that BOA discounts, which ranged from 1% to 57% off commercial rates, saved members at least \$2.5 million in service dollars. Analysis of comparable contracting costs for establishing contracting activity at FEDLINK saved the government approximately \$9,7400,000 in cost avoidance (estimating \$20,000 per contracting action). Thus, through discounts and contracting cost avoidance alone - not considering FEDLINK's invoice processing, education, and other services - the FEDLINK program saved \$12,240,000, an amount triple the program's annual operating budget.

### **SYMIN System Activities**

The FEDLINK fiscal accounting system, SYMIN, continued productive operations throughout the year. The database management system was upgraded to Paradox 4.0 from Paradox 3.5 to allow a smoother transaction flow on the network and to enable the systems staff to develop further improvements to the system.

### **FEDLINK Fiscal Operations**

FEDLINK Fiscal Operations (FFO) establishes federal agencies' membership in FEDLINK; determines FEDLINK service fees for members; prepared member interagency agreements (IAGs), IAG amendments, and FEDLINK vendor delivery orders; and administers FEDLINK member accounts, including processing all FEDLINK vendor invoices and generating individual FEDLINK member account statements.

FY 1993 was the most successful year of operating performance in the history of the FEDLINK program. No temporary obligation was necessary for FY 1993 because of the complete reconciliation of the FY 1993 transfer pay service dollar obligation. In other significant accomplishments, FFP developed and implemented guidelines to successfully control and monitor the delivery order process; decreased the amount of interest net of discounts remitted to FEDLINK vendors for late payment by more than \$37,000 from the FY 1992 total of \$38,360 to approximately \$1,200 in FY 1993; reconciled FEDLINK accounts from FY 1986 through FY 1989; completed the block move of multi-year funds, processing more than 800 delivery orders representing \$1.5 million; ensured that administrative expenditure obligations did not exceed program fee projections; successfully performed Financial Management Systems (FMS) reviews; and continued to inform the FEDLINK member/vendor community through information alerts, meetings, vendor fairs, and newsletters.

### **Summary Statistics**

FFO processed FY 1993 registrations from federal libraries, information centers, and other federal offices resulting in 892 signed FY 1993 IAGs compared to 1,127 basic IAGs processed in FY 1992. In addition, FFO processed 3,487 IAG Amendments (1,535 FY 1993 and 1,952 prior year adjustments) for agencies adding, adjusting, or terminating service funding. These IAGs and IAG Amendments represented 4,256 individual service requests to begin, renew, convert, or cancel service from 84 FY 1993 FEDLINK vendors. The service requests were executed by delivery orders generated by FFO and issued to vendors by C&L. Delivery orders represented \$48,412,900 in FY 1993 and prior year transfer pay service dollars. For FY 1993 alone FEDLINK processed \$48,412,900 in FY 1993 and prior year transfer pay service dollars for 2,810 transfer pay accounts and approximately \$48.7 million in service dollars for 329 direct pay users. FY 1993 activity represented a total of 3,003 FEDLINK agency accounts.

On behalf of transfer pay users, FFO processed for payment 50,078 invoices during FY 1993 for both current and prior year orders. Vendor payments from agencies' FY 1993 transfer pay accounts totaled \$25,206,631. FFO continued to maintain open accounts for three prior years for members using book and serials services, paying publications services invoices based on the order date of the invoiced items.

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### INTERNATIONAL INFORMATION RESEARCH (SPACE)

Walt Blados Program Manager, International Branch NASA Scientific & Technical Information Program

**VUGRAPHS ONLY** 



# International Aspects of STI

Presented at Military Libraries Workshop Albuquerque, New Mexico November 16, 1993



## **Current Broad Definition of STI**

## Scientific and Technical Information (STI) -

- Is basic and applied research results from the efforts of scientists and engineers.
- Includes new theory and information obtained from experimentation, observations, instrumentation, or computation in the form of text, numeric data, or images.

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communication and its usefulness and value to a wide spectrum of and record in print, digital, magnetic, or other media to enhance its May further transformed, described, evaluated, and/or synthesized users and uses.

SOURCE: NSF Study. "Dissemination of Federal STI"



### **NASA STI Program History**

Established as a result of the National Aeronautics and Space Act of 1958 to:

- Provide for the widest appropriate dissemination of the results of NASA research and development, and
- Preserve the role of the United States as a leader in aeronautical and space science technology by acquiring world-wide STI and disseminating it in the U.S.



### Space Act of 1958

Directs NASA to conduct its activities:

"so as to contribute... to cooperation by the U.S. with other nations...

of information concerning its activities and the results thereof." "to provide the widest practical and appropriate dissemination

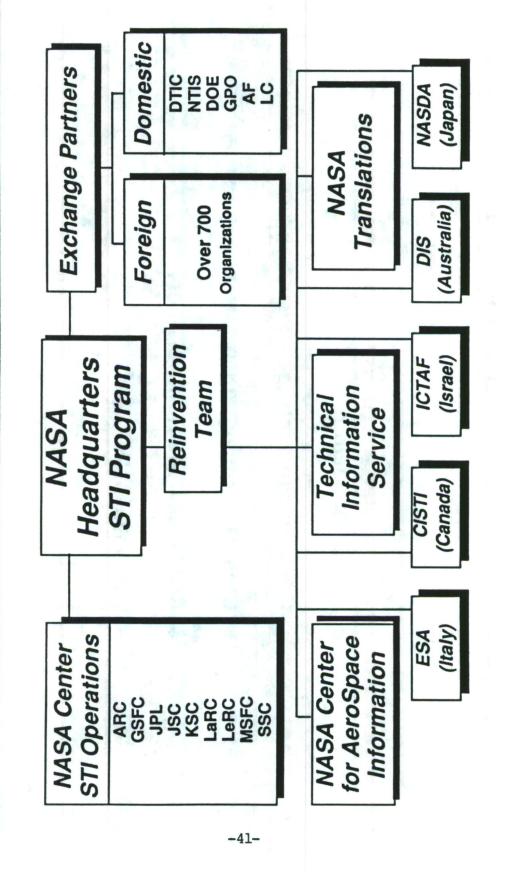


### **NASA STI Program Mission**

authorized access, and manage delivery of the information to NASA Identify worldwide sources of scientific, technical, engineering and related information, develop required policy statements, facilitate and its customer base.



# STI Program Service Components





### STI Program Customers

- NASA
- NASA Contractors
- Other Government Agencies
- Other Government Agency Contractors
- Academia (K-12 & Universities)
- International Partners
- Public (Domestic & International)



### Major Products / Services

- Scientific & Technical Aerospace Reports (STAR)
- International Aerospace Abstracts (IAA)
- NASA REsearch CONnection (RECON)
- Databases (RECON, DIALOG, ESA / IRS)
- Special Bibliographies
- Document/Video Delivery
- NASA Thesaurus
- Reference Service
- NASA Library Catalog (ARIN)
- Publications/Printing Management
- Standards/Policy



### **Types of Material Collected**

- Journal Articles
- Reports
- Conferences
- Books
- Theses
- Reprints
- Translations
- Patents



### STI Database

- 1962 to present
- Over 3 million records
- Over 90,000 added each year



## **NASA International STI Program**

### **OBJECTIVES**

- Collect worldwide aerospace STI relevant to NASA goals and objectives
- Develop international partnerships
- Maintain exchange equity



### International Acquisitions

- Over 650,000 Non-U.S. R&D documents/summaries 1962 - present
- Over 26,000 additions in 1992
- over 50 countries
- 90% are in English (all have English summaries)



### International Statistics 1992

Contributors to the NASA

Top International

STI Database in 1992



## Foreign Acquisitions Initiatives

- Review Bilateral Agreements
- Review Tripartite Agreements
- Obtain Russian STI



# Mechanisms for Foreign Acquisitions

Programs	Interagency Bilateral NASA/ESA Tripartite NASA/National Agreement	AIAA	Department of State Vendors
Materials	Technical Reports & Grey Literature	Published Literature  - Journals  - Books  - Proceedings	Difficult to obtain materials Special items
Approach	Exchange	Contract	Direct Purchase

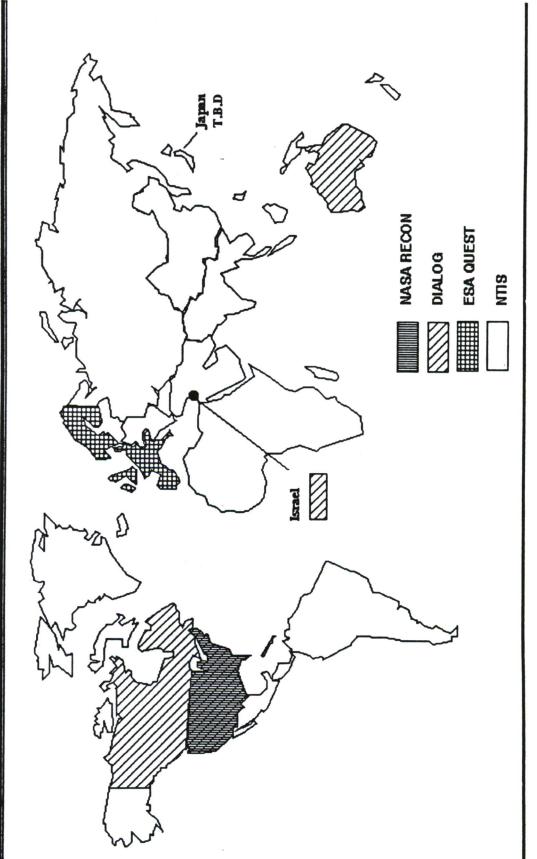
WB-1200 p14 11/29/93



### **AGARD Initiatives**

- AGARD Guide to Aerospace Report Series
- Manual for Evaluating Effectiveness of Information Centers
- Research Agenda
- Proactivities in Information Centers
- International Aerospace Database

# NASA Online Dissemination Mechanisms



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### NASA/DOD AEROSPACE KNOWLEDGE DIFFUSION RESEARCH PROJECT— USERS AND USES OF DOD TECHNICAL REPORTS: A REPORT FROM THE FIELD

Paper Thirty Four Presented at the 1993 Military Librarians Workshop Co-sponsored by the Phillips Laboratory and the Rio Grande Chapter of the Special Libraries Association Albuquerque, New Mexico November 15-19, 1993

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### Introduction

The NASA/DoD Aerospace Knowledge Diffusion Research Project attempts to understand the information environment in which U.S. aerospace engineers and scientists work, the information-seeking behavior of U.S. aerospace engineers and scientists, and the factors that influence the use of scientific and technical information (STI) (Pinelli, Barclay, and Kennedy, 1991). Such an understanding could (1) lead to the development of practical theory, (2) contribute to the design and development of aerospace information systems, and (3) have practical implications for transferring the results of federally funded aerospace research and development (R&D) to the U.S. aerospace community. The Project fact sheet is the appendix.

This paper presents data from two information-seeking behavior studies involving U.S. aerospace engineers and scientists that were undertaken as Phase 1 activities of the NASA/DoD Aerospace Knowledge Diffusion Research Project. Responses from three groups of respondents - DoD, other government, and

industry - are presented for two sets of selected questions. One set focuses on DoD technical reports: their use and importance, reasons for non-use, the factors affecting their use, the sources used to find out about them and the source used to physically obtain them, and the quality of DoD technical reports. The second set focuses on information sources used in problem solving: the use of U.S. Government technical reports in problem solving and the information sources used to find out about U.S. Government technical reports.

### **Background**

Derian (1990) has described the U.S. aerospace industry as a "sheltered" (as opposed to an exposed) culture because of the role played by government in the innovation process and because aerospace operates in both government and private sector markets. He points out that, unlike other U.S. industries, aerospace, principally the commercial aviation sector, has been the beneficiary of federally funded R&D for nearly a century. According to Mowery (1985), "The commercial aircraft industry is virtually unique among U.S. manufacturing industries in that a Federal research organization, the National Advisory Committee for Aeronautics (NACA) and subsequently the National Aeronautics and Space Administration (NASA), has for many years conducted and funded research on airframe and propulsion technologies."

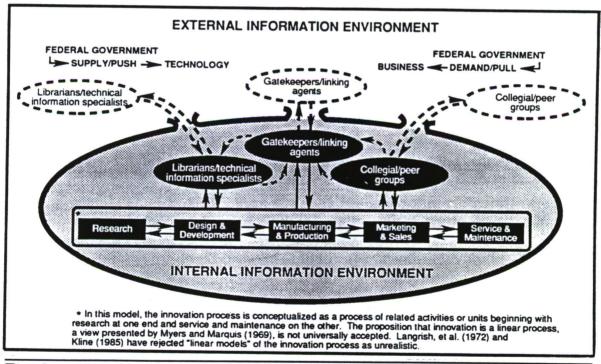


Fig. 1. Boundary-Spanning Activities in the U.S. Aerospace Information Environment

The commercial aviation sector has also benefitted from considerable investment in terms of research and procurement by the Department of Defense (DoD). "Although not intended to support innovation in any but military airframe and propulsion technologies, [this investment] has, nonetheless, yielded indirect, but very important, technological spillovers to the commercial aircraft industry" (Mowery, 1985).

Derian (1990) states that the aerospace industry is subject to a unique set of externalities that result from government intervention which, in turn, change the structure and regulation of the marketplace. Thus, the external environments of sheltered and exposed cultures are distinctive as is the interaction between the two cultures and the external environment. In the case of the U.S. aerospace industry, the interaction with and isolation from the external environment are moderated somewhat by the "supply-push/demand-pull" effect created by the U.S. Government's involvement, primarily through NASA and the DoD, in the aerospace innovations process. (See figure 1.) From a policy perspective, the U.S. Government acts as both a performer and a dominant purchaser of aerospace R&D, supports precommercial research in civilian and military aircraft technologies, and plays a major role in diffusing the results of that research throughout the aerospace industry.

Information use by engineers and scientists has been variously studied by information and social scientists, the earliest studies having been undertaken in the late 1960s. The results of these studies have not accumulated to form a significant body of knowledge that can be used to develop a general theory regarding the information-seeking behavior of engineers and scientists. The difficulty in applying the results of these studies has been attributed to the lack of a unifying theory, a standardized methodology, and the common definitions (Rohde, 1986).

Despite the fact that numerous "information use" studies have been conducted, information use by engineers and information use in engineering are neither broadly known nor well understood. There are a number of reasons (Berul, et al., 1965): (1) many of the studies were conducted for narrow or specific purposes in unique environments such as experimental laboratories; (2) many, if not most, of them focused on scientists exclusively or engineers working in a research environment; (3) few studies have concentrated on engineers, especially engineers working in manufacturing and production; (4) from an information use standpoint, some engineering disciplines have yet to be studies; (5) most of the studies have concentrated on the users' use of information in terms of a library and/or specific information packages such as professional journals rather than how users produce, transfer, and use information; and (6) many of the studies, as previously stated, were not methodologically sophisticated and few included testable hypotheses or valid procedures for testing the study's hypotheses.

Further, we know very little about the diffusion of knowledge in specific communities such as defense. In the past 25 years, few studies have been devoted to understanding the information environment in which DoD engineers and scientists work, the information-seeking behavior of DoD engineers and scientists, and the factors that influence the use of DoD STI. Presumably, the results of such studies would have implications for current and future DoD STI systems and for making decisions regarding the DoD STI program. Three studies specifically concerned with DoD include (1) a study of the information needs of DoD personnel engaged in research, development, and test and evaluation (RDT&E) activities (Berul, et al., 1965), (2) a study of the information acquisition patterns of engineers and scientists working in the defense community (Goodman, et al., 1966), and (3) a study undertaken by King Research to describe the use and value of major information products and services provided by the Defense Technical Information Center (DTIC) (Nancy K. Roderer; Donald W. King; and Sandra E. Brouard, 1983).

### Methodology

Data were collected through two self-administered (reported) questionnaires. The approximately 34,000 members of the American Institute of Aeronautics and Astronautics (AIAA) served as the sample population. The sample frame consisted of 6,781 AIAA members who reside in the United States (U.S.) and who are employed primarily in academia, government, and industry. Systematic sampling was used to select 3,298 members to participate in the first (green) survey and 1,795 members to participate in the second (yellow) survey. Responses to the first survey numbered 2,016 and to the second survey, 975. The adjusted (corrected) response rates for the two surveys were 70 and 63 percent, respectively.

It should be noted that the data reported in this paper reflect the responses of DoD engineers and scientists belonging to the AIAA. The data may not be generalizable to DoD engineers and scientists who are not members of professional societies or who may belong to other professional societies. Because the sample came from the AIAA, the responses may not necessarily be generalizable to the population of all DoD engineers and scientists.

### Presentation Of The Data

Demographic data regarding survey participants appear in table 1. Data concerning DoD technical reports are presented first followed by data concerning the information sources used in problem solving, the use of U.S. Government technical reports in problem solving, and the information sources used to find out about U.S. Government technical reports.

The demographic characteristics are about equal between and among the two surveys and the three groups. Regardless of affiliation — DoD, other government, and industry — most of the respondents held a graduate degree; were educated as engineers; and work as engineers in technical management, research, and design/development. Industry respondents had the highest (mean) number of years of professional work experience. DoD respondents were more likely than other government respondents to report their primary professional duties as technical management and design/development. Most "other government" respondents are predominantly employed by NASA.

Table 1. Demographics [N = 2,016; N = 975]

	De	oD	Other Go	vernment	Indu	ıstry
Demographics	Survey 1 (n = 202)		Survey 1 (n = 251)	Survey 2 (n = 106)		
Education:						
Undergraduate Degree Or Less	34.7	35.0	29.9	26.2	33.5	33.5
Graduate Degree	65.3	65.0	70.1	73.8	66.5	66.5
Educated As:						
Engineer	86.9	91.3	79.4	77.4	86.4	87.9
Scientist	8.6	7.8	15.9	16.0	10.2	6.8
Other	4.5	0.9	4.7	6.6	3.4	5.3
Works As:	=					
Engineer	68.7	79.6	65.3	67.7	72.0	70.0
Scientist	7.5	6.8	12.1	14.7	5.3	4.7
Other	23.8	13.6	22.6	17.6	22.7	25.3
Years of Professional Work			3			, ×
Experience:				,		
Mean $(\overline{X})$	17.1	17.2	20.0	18.6	22.0	22.6
Primary Professional Duty:						
Academic/Teaching	1.0	1.0	0.4	0.9	0.1	0.2
Research	20.3	14.6	34.3	42.5	11.2	7.4
Administration/Management	6.4	2.0	5.6	5.7	6.4	7.8
Technical Management	41.6	40.8	37.1	28.3	34.8	38.4
Design/Development	23.3	34.0	18.3	17.9	39.2	37.6
Manufacturing/Production	0.5	0.0	0.4	0.0	1.7	1.7
Marketing/Sales/Service	0.5	1.9	0.8	0.0	3.6	3.6
Other	6.4	5.9	3.2	4.7	3.1	3.4

### Use and Importance of Technical Information Products

Of the six technical information products, DoD technical reports were used more frequently by DoD respondents (84%) and industry respondents (67-9%) (table 2).

NASA technical reports were used more frequently by other government respondents (92.1%) and industry respondents (74.6%). Conference/meeting papers and journal articles were used most often by other government respondents (90.4%, 90.1%), followed by industry (87.4%, 86.8%) and DoD respondents (69.0%, 75.0%). Technical translations were the least used information products. Of the three groups, technical translations were used most frequently by other government respondents (37.6%). AGARD technical reports were used most frequently by other government respondents (47.8%), followed by DoD respondents (42.1%), and industry respondents (31.1%).

Table 2. Use of Technical Information Products by U.S. Aerospace Engineers and Scientists

	Percentage Of Respondents Using Product In -		
Information Products	DoD	Other Governments	Industry
Conference/Meeting Papers Journal Articles Technical Translations AGARD Technical Reports DoD Technical Reports NASA Technical Reports	69.0 75.0 29.0 42.1 84.0 66.0	90.4 90.1 37.6 47.8 51.1 93.1	87.4 86.8 22.6 31.1 67.9 74.6

Importance was measured on a 1 to 5 point scale with "1" being the lowest possible importance and "5" being the highest possible importance. Overall, survey participants accorded a higher importance rating to the information products they used the most (table 3). Of the six technical information products, DoD technical reports were used more frequently by DoD respondents. Of the same six technical information products, DoD respondents considered DoD technical reports to be the most important technical information products.

Other government respondents and industry respondents accorded DoD technical reports low importance ratings: 23.1% and 40.3%, respectively. The use and importance of DoD technical reports is influenced by the classified and/or restricted distribution nature of many of these reports.

NASA technical reports were used most often by other government respondents. They were also considered to be the most important technical information product by other government respondents (66.7%), followed by conference/meeting paper (64.1%), and journal articles (61.9%). Conference/meeting papers and journal articles were used most often by industry respondents. They were also considered to be most important: 51.9% and 48.8%, respectively. Data on in-house technical reports are not presented here but previous analysis of the green survey data indicates that in-house technical reports are used most often and are rated highest by industry respondents.

Of the six technical information products, technical translations received the lowest importance ratings: DoD (10.6%), other government (12.7%), and industry (4.9%). AGARD technical reports received marginally higher importance ratings: DoD (23.1%), other government (20.0%), and industry (11.9%).

Table 3. Importance of Technical Information Products to U.S. Aerospace Engineers and Scientists

	Combined "4" and "5" Percentage of Respondents In <sup>a</sup>		
Information Products	DoD	Other Governments	Industry
Conference/Meeting Papers	46.6	64.1	51.9
Journal Articles	42.4	61.9	48.8
Technical Translations	10.6	12.7	4.9
AGARD Technical Reports	23.1	20.0	11.9
DoD Technical Reports	69.7	23.1	40.3
NASA Technical Reports	50.0	66.7	41.5

<sup>&</sup>lt;sup>a</sup>A 1 to 5 point scale was used to measure importance with "1" being the lowest possible importance and "5" being the highest possible importance. Hence, the higher the percentage, the greater the importance of the product.

### Reasons for Non-Use of DoD Technical Reports

Survey participants were asked their reasons for non-use of DoD technical reports. (See table 4.) Among DoD participants who did not use DoD technical reports, "not relevant to my research" (92.9%) and "not used in my discipline" (69.2%) were the reasons most frequently selected. For other government and industry respondents who did not use them, "not relevant to my research" and "not available/accessible" were the most frequently selected reasons: (82.2% and 36.8%) and (66.2% and 47.1%), respectively.

Table 4. Reasons for Non-Use of DoD Technical Reports

	Percentage Of Respondents Not Using DoD Technical Reports In		
Reasons	DoD	Other Governments	Industry
Not Available/Accessible Not Relevant To My Research Not Used in My Discipline Not Reliable/Technically Inaccurate Not Timely/Current	38.5 92.9 69.2 0.0 0.0	36.8 82.2 35.3 6.9 16.7	<b>47.1 66.2</b> 40.5  4.6 19.8

### <u>Factors Affecting Use of DoD Technical Reports</u>

Survey participants who used DoD technical reports were asked to indicate the extent to which seven factors affected report use (table 5). Overall, **accessibility** and **relevance** appear as the factors exerting the greatest influence on use for all three groups of respondents. Among DoD respondents, accessibility, relevance, and technical quality or reliability appear as the factors exerting the greatest influence on use. For other government respondents, relevance, accessibility, and familiarity or experience were the factors exerting the greatest influence on use. Accessibility, relevance, and familiarity or experience were also the factors exerting the greatest influence on use of DoD technical reports by industry respondents.

Table 5. Factors Affecting the Use of DoD Technical Reports

	Combined	d "4" and "5" Percentage of Respo	ndents In <sup>a</sup>
Factors	DoD	Other Governments	Industry
Accessibility	84.5	61.6	71.2
Ease of Use	61.9	53.9	53.9
Expense	28.6	30.0	30.0
Familiarity Or Experience	67.6	60.0	62.5
Technical Quality Or Reliability	68.4	50.0	48.8
Comprehensiveness	50.0	52.5	47.6
Relevance	81.6	70.0	68.8

<sup>&</sup>lt;sup>a</sup>A 1 to 5 point scale was used to measure importance with "1" being the lowest possible importance and "5" being the highest possible importance. Hence, the higher the percentage, the greater the influence of the factor on the use of DoD technical reports.

Considering both non-users and users of DoD technical reports, relevance appears to be a stronger predictor of DoD technical report use than does accessibility. The influence of accessibility is perhaps best explained by the classified and/or restricted distribution nature of DoD technical reports.

### Awareness of and Physical Access to DoD Technical Reports

From respective lists of 11 and 7 sources, survey participants who used them were asked to indicate how often they find out about (become aware of) and physically obtain DoD technical reports (tables 6 and 7).

Survey participants appear to find out about DoD technical reports through colleagues; citations in reports, journal articles, and conference/meeting papers; and intentional search of the library. For DoD respondents, the three most frequently used sources include colleagues (82.9%); intentional search of the library (64.8%); and citations in reports, journal articles, and conference/meeting papers (64.5%). For other government respondents, the sources include data base searches (72.5%); citations in reports, journal articles, and conference/meeting papers (71.8%); and intentional search of the library (67.5%). The sources most frequently used by industry respondents to find out about DoD technical reports were citations in reports, journal articles, and conference/meeting papers (81.8%); colleagues (69.0%); and intentional search of the library (60.4%). Overall, participants physically obtained DoD technical reports from the library, from a colleague, and directly from DoD (table 7). This pattern was consistent for all three groups.

Table 6. Sources Used by U.S. Aerospace Engineers and Scientists to Find Out About DoD Technical Reports

	Combined "1" and "2" Percentage of Respondents In <sup>a</sup>			
Source	DoD	Other Governments	Industry	
Data Base Search	60.0	72.5	58.9	
Announcement Journal	25.4	55.0	39.1	
Current Awareness Publication	16.0	47.8	22.4	
Cited In Report/Journal/Paper	64.5	71.8	81.8	
Referred By Colleague	82.9	56.1	69.0	
Referred By Librarian/Technical Information Specialist Routed By Librarian/Technical	44.0	25.7	32.9	
Information Specialist	30.7	17.9	21.1	
Intentional Search of Library	64.8	67.5	60.4	
Accident/Browsing	37.0	39.4	40.5	
DoD Sends Them	45.9	46.2	33.4	
Author Sends Them	37.0	30.8	21.1	

<sup>&</sup>lt;sup>a</sup>A 1 to 4 point scale was used to measure use with "1" being frequently and "4" being never. Hence, the higher the percentage, the greater the use of the source to find out about DoD technical reports.

### Quality of DoD Technical Reports

Survey participants who used DoD technical reports were asked to rate DoD technical reports on six aspects (table 8). Overall, survey participants accorded DoD technical reports the highest rating for precision/accuracy of data. DoD respondents rated DoD technical reports highest for quality of information (89.6%), followed by precision/accuracy of data (84.4%), followed by adequacy of data/documentation (75.3%).

Table 7. Sources Used by U.S. Aerospace Engineers and Scientists to Physically Obtain DoD Technical Reports

	Combined "1" and "2" Percentage of Respondents In <sup>a</sup>			
Source	DoD	Other Governments	Industry	
DoD Sends Them To Me Author Sends Them To Me I Request Them From Author I Order Them From Library I Order Them From NTIS I Get Them From A Colleague Library Routes Them To Me	41.6 37.7 28.6 67.6 35.6 69.7 29.3	43.9 31.7 35.9 77.5 21.1 61.0 13.5	36.2 20.1 27.0 76.0 42.9 59.7 18.7	

<sup>&</sup>lt;sup>a</sup>A 1 to 4 point scale was used to measure use with "1" being frequently and "4" being never. Hence, the higher the percentage, the greater the use of the source to physically obtain DoD technical reports.

Table 8. How U.S. Aerospace Engineers and Scientists Rate DoD Technical Reports

	Combined	Combined "1" and "2" Percentage of Respondents In <sup>a</sup>		
Factor	DoD	Other Governments	Industry	
Quality of Information Precision/Accuracy Of Data Adequacy Of Data/Documentation	89.6 84.4 75.3	<b>65.8</b> <b>78.1</b> 50.0	<b>78.1 73.3</b> 55.1	
Organization/Format Quality Of Graphics Timeliness/Currency Advancing "The State Of The Art"	64.5 57.2 54.6 63.6	53.6 53.7 58.6 <b>61.5</b>	<b>57.5</b> 43.7 43.4 47.4	

<sup>&</sup>lt;sup>a</sup>A 1 to 5 point scale was used to rate DoD technical reports, with "1" being excellent and "5" being no opinion. Hence, the higher the percentage, the higher the rating for each characteristic.

Other government participants rated DoD technical reports highest for precision/accuracy of data (78.1%), followed by quality of information (65.8%), and advancing "the state of the art" (61.5%). Industry respondents rated DoD

highest for quality of information (78.1%), followed by precision/accuracy of data (73.3%), and organization/format (57.5%).

### Information Use and Problem Solving

From a list of eight choices, survey participants were asked to categorize the most important technical project, task, or problem they had worked on in the past 6 months (table 9). Overall, survey participants selected the category "research" as the modal response. DoD participants chose the following three categories: research (33.7%), development (24.2%), and management (19.5%). Other government respondents selected research (44.4%), followed by management (17.7%) and design (15.2%). Industry respondents selected development (27.7%), followed by design (25.9%) and research (22.1%) as the categories for the most important technical project, task, or problem they had worked on in the past 6 months.

Table 9. Type of Most Important Technical Project, Task, or Problem

	Percentage Of Respondents Using Product In		
Туре	DoD	Other Governments	Industry
Educational	4.7	1.6	2.1
Research	33.7	44.4	22.1
Design	12.6	15.2	25.9
Development	24.2	13.2	27.7
Manufacturing	0.0	0.0	1.5
Production	3.2	1.2	2.3
Management	19.5	17.7	12.7
Computer Applications	2.1	6.6	5.7

Survey participants were asked to identify the sources they used to obtain the information they had used to complete their most important technical project, task, or problem in the past 6 months (table 10). Overall, survey participants relied on their personal stores of information, followed by co-workers in their rganization, and search of the library. Following these three sources, survey participants used colleagues outside of the organization, followed by a data base search, and a librarian in their organization. DoD respondents were a little more likely to do a library search than were other government or industry respondents.

Survey participants were asked if they had used U.S. Government technical reports in completing the most important technical project, task, or problem they had worked on in the past 6 months (table 11). Overall, a majority of survey participants used U.S. Government technical reports. About 80% of the DoD respondents had used U.S. Government technical reports, followed by 72.6% of the other government respondents, and 59% of the industry respondents. Survey participants who used them were asked at what stage - near beginning; near middle; near end; or throughout the entire project, task, or problem - they had

used these reports (table 12). Overall, the majority of survey participants used U.S. Government technical reports through the entire project, task, or problem, followed by near the beginning and middle.

Table 10. Sources Used by U.S. Aerospace Engineers and Scientists in Completing Most Important Technical Project, Task, or Problem

	Percentage Of Respondents Using Product In		
Source	DoD	Other Governments	Industry
Personal Store Of Information Co-Worker In My Organization Library Search Colleague Outside My	77.7 74.8 62.9	77.8 70.6 57.1	74.4 69.5 56.1
Organization Data Base Search Librarian In My Organization	56.4 <b>48.0</b> 33.2	52.0 <b>46.4</b> 32.5	46.6 <b>45.4</b> 31.7

Table 11. Use of U.S. Government Technical Reports in Completing Most Important Technical Project, Task, or Problem

	Percentage Of Respondents Using U.S Government Technical Reports In			
Use	DoD	Other Governments	Industry	
Yes No	80.2 19.8	72.6 27.4	59.5 40.5	

Table 12. Stage at Which U.S. Government Technical Reports Used to Complete Most Important Technical Project, Task, or Problem

Percentage Of Respondents Using U.S Government Technical Reports In				
DoD	Other Governments	Industry		
37.3 19.6 15.2	39.7 22.3 20.7	43.3 21.8 11.6 <b>62.9</b>		
	37.3 19.6	37.3 39.7 19.6 22.3 15.2 20.7		

Survey participants were asked to identify the sources they had used to find out about the U.S. Government technical reports used in completing their most important technical project, task, or problem (table 13). Overall, survey participants relied on their personal stores of information, followed by co-workers in their organization and a search of the library. Following these three sources, survey participants used colleagues outside of the organization, followed by a data base search and a librarian in their organization.

Table 13. Sources Used by U.S. Aerospace Engineers and Scientists to Find Out About U.S. Government Technical Reports

	Percentage Of Respondents Using U.S Government Technical Reports In			
Source	DoD	Other Governments	Industry	
Personal Store Of Information	89.9	87.1	80.0	
Co-Worker In My Organization	67.3	68.5	58.8	
Library Search	48.4	53.4	46.4	
Colleague Outside My				
Organization	50.9	51.1	47.4	
Data Base Search	41.3	43.8	42.1	
Librarian In My Organization	30.8	33.7	29.0	

Finally, we compared the sources used by survey respondents to complete their most important technical project, task, or problem in the past 6 months with the sources they had used to find out about the U.S. Government technical reports used to complete the same technical project, task, or problem (table 14). Although the percentages differed slightly, the sources used to complete the most important technical project, task, or problem they had worked on the in the past 6 months compared with the sources they had used to find out about the U.S. Government technical reports used to complete the same technical project, task, or problem were the same.

Whether searching for information or seeking U.S. Government technical reports, the survey participants' search patterns are the same. All three groups relied on their personal stores of information, followed by co-workers in their own organization, and library search. If these sources did not prove sufficient, survey participants consulted colleagues outside the organization, a data base search, and a librarian.

Table 14. Sources Used by U.S. Aerospace Engineers and Scientists to Solve Technical Problems and to Find Out About U.S. Government Technical Reports

1	Percentage Of Respondents In					
	DoD		Other Government		Industry	
Source	Problem Solving	U.S. Government Technical Reports	Problem Solving	U.S. Government Technical Reports	Problem Solving	U.S. Government Technical Reports
Personal Store Of Information Co-Worker In My Organization Library Search Colleague Outside My Organization Data Base Search Librarian In My Organization	77.7 74.8 62.9 56.4 48.0 33.2	89.9 67.3 48.4 50.9 41.3 30.8	77.8 70.6 57.1 52.0 46.4 32.5	87.1 68.5 53.4 51.1 43.8 33.7	74.4 69.5 56.1 46.6 45.4 31.7	80.0 58.8 46.4 47.4 42.1 29.0

### **Findings**

- 1. Conference/meeting papers, journal articles, and DoD technical reports were the information products used most frequently by DoD respondents; conference/meeting papers, journal articles, and NASA technical reports were the information products used most frequently by other government and industry respondents.
- 2. Conference/meeting papers, DoD technical reports, and NASA technical reports received the highest importance rating among DoD respondents; conference/meeting papers, journal articles, and NASA technical reports received the highest importance rating among other government and industry respondents.
- 3. The reasons most frequently cited for non-use of DoD technical reports by DoD respondents were "not relevant to my research" and "not used in my discipline;" the reasons most frequently cited for non-use of DoD technical reports by other government and industry respondents were "not available/accessible" and "not relevant to my research."
- 4. The factors affecting the use of DoD technical reports were accessibility and relevance among all three groups of users. Technical quality or reliability was also cited as a factor by DoD respondents; familiarity or experience was also cited by other government respondents and by industry respondents.
- 5. All three groups of respondents used citations in a report/journal/paper to find out about DoD technical reports; a reference by a colleague and intentional search of the library were also frequently used by DoD and

- industry respondents. Data base searches and intentional search of the library were frequently used by other government respondents.
- 6. The sources used most frequently by all three groups of respondents to physically obtain DoD technical reports include "I get them from a colleague;" "I order them from the library;" and "DoD" sends them to me."
- 7. Quality of information and precision/accuracy of data were cited as the highest factors of excellence in DoD technical reports by all three groups of respondents. Adequacy of data/documentation was also cited as among the highest factors of excellence by DoD respondents. Advancing the "state of the art" was cited as among the highest factors of excellence by other government respondents. Organization/format was cited as among the highest factors of excellence by industry respondents.
- 8. The sources used to obtain the information needed to complete the most important technical project, task, or problem were the same for all three groups of respondents. DoD respondents made the greatest use of U.S. Government technical reports in completing their most important technical project, task, or problem; other government and industry respondents used U.S. Government technical reports to a lesser extent.
- 9. U.S. Government technical reports were used throughout the entire project, task, or problem by all three groups of respondents who indicated use of reports to complete technical projects, tasks, or problems.
- 10. The sources used to obtain the information needed to complete the most important technical project, task, or problem and to find out about the U.S. Government technical reports used to complete the most important project, task, or problem were the same for all three groups of respondents.

## **Closing Remarks**

We have yet to achieve a thorough understanding of how knowledge diffuses within the defense community or how DoD STI diffuses throughout the U.S. aerospace community. Political, technological, and social changes coupled with the passage of 25+ years have undoubtedly altered the relevance/application of the findings of the original DoD user studies for making decisions about the DoD STI program and for designing STI systems. The STI dissemination model, used by DoD and NASA, is limited by its passivity: it does not take users into consideration except when they enter the system and request assistance. User requirements are rarely known or considered in the design of information products or services and the one-way, source-to-user transfer procedures of this model are seldom responsive in the user context. A knowledge diffusion model, grounded in theory and practice associated with problem solving and the diffusion of innovation, would better meet the information needs of engineers and scientists

working in the post Cold War era. Knowledge diffusion emphasizes active intervention as opposed to dissemination and access, uses proactive information intermediaries to enhance both formal and informal communication, and encourages the development of user-oriented STI products and services.

What are the implications of the findings presented in this paper? These findings support the assumption that members of a community such as DoD rely on the established body of knowledge residing within their community. The further away an information resources resides from the DoD community, the less the likelihood of its use, despite its quality or potential relevance for DoD users. This statement is also true for industry respondents. For example, survey respondents make little use of AGARD technical reports and less use of technical translations. Conversely, the availability/accessibility of DoD technical reports influences the extent of their use within other communities. Communities notwithstanding, however, relevance appears to be the single most influential factor in determining DoD technical report use.

The burden of identification and acquisition falls on the user of DoD technical reports rather than on the librarian/technical information specialist; thus the successful diffusion of knowledge diffusion currently depends on the proactivity of the user. Although the librarian/technical information specialist plays an important linking role in diffusing knowledge, this role remains essentially passive for a variety of reasons. Implementing a knowledge diffusion model will require an increased proactive role for the librarian/technical information specialist. The ultimate success of the knowledge diffusion model may lie in effectively linking the formal and informal elements of the knowledge production, transfer, and use process. Effective linkage could be provided by the librarian/technical information specialist furnishing users with the "right" kind and the "right" amount of information at the "right" time.

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## **Appendix**

## NASA/DOD AEROSPACE KNOWLEDGE DIFFUSION RESEARCH PROJECT

### **Fact Sheet**

A research study is investigating the production, transfer, and use of scientific and technical information (STI) in aerospace, a community which is becoming more interdisciplinary in nature and more international in scope. Sponsored by the National Aeronautics and Space Administration, the Aerospace Knowledge Diffusion Research Project is being conducted by the Indiana University Center for Survey Research, the NASA Langley Research Center, and RPI with the cooperation of the AGARD and AIAA technical information panels.

This four-phase project will provide descriptive and analytical data regarding the flow of STI at the individual, organizational, national, and international levels. It will examine both the channels used to communicate STI and the social system of the aerospace knowledge diffusion process. The results of the Project should provide useful information to R&D managers, information managers, and others concerned with improving access to and utilization of STI.

Phases 1 and 4 investigate the information-seeking habits and practices of U.S. and non-U.S. aerospace engineers and scientists and place particular emphasis on their use of government funded aerospace STI. Phase 2 examines the industry-government interface and places particular emphasis on the role of the information intermediary in the knowledge diffusion process. Phase 3 concerns the academic-government interface and places particular emphasis on the information intermediary-faculty-student interface.

Empirically, little is known about the production, transfer, and use of aerospace STI in general and about the information-seeking behavior of aerospace engineers and scientists in particular. Less is known about the effectiveness of information intermediaries and the role(s) they play in knowledge diffusion. It is generally assumed that information intermediaries play a significant role in the aerospace knowledge diffusion process. However, a strong methodological base for measuring or assessing their effectiveness is lacking.

The ability of aerospace engineers and scientists to identify, acquire, and utilize STI is of paramount importance to the efficiency of the R&D process. An understanding of the process by which aerospace STI is communicated through certain channels over time among members of the social system would contribute to increasing productivity, stimulating innovation, and improving and maintaining the professional competence of aerospace engineers and scientists.

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## FEDERAL LIBRARY CONTRACTING

## Gay Goethert Supervisor, AEDC Technical Library November 16, 1993

I want to briefly describe the AEDC Technical Library. This is an engineering library with subject specialties in aerodynamics, aircraft propulsion, optics, and physics. We have over 420,000 publications in our collection including classified technical reports.

The Library supports all personnel on the base. We support customers off base locally by being part of an alliance between AEDC, the University of Tennessee Space Institute, and a community college. Nationally we serve other libraries including government, industry, and academic.

The staff consists of seven contractor employees (four librarians and three assistants). The average time an employee has worked in the Library is 16 years, so frequent personnel turnovers have not been a problem.

The Library has been operated by three different major contractors since it was established. A fourth contractor operated the Library for 2 months while a contractor was in the security clearance process.

SSI Services, Inc., has been at AEDC since 1985. SSI is a company in Vanadium Enterprises which is located in Pennsylvania. In addition to library services, SSI provides other types of mission support to the Center. Examples of this support are engineering design and maintenance, environmental health and safety, security, and computer support.

Within SSI, the Library is part of the Administrative Services Department and is in the Administration Branch. This branch also contains other services such as technical publications, graphics, communications, and printing.

Our operations as contractor are based on the Air Force Statement of Work. In essence, the Statement of Work says that the contractor will operate a technical library to support the research, development, test, and evaluation programs of the Air Force.

The Air Force evaluates our performance twice a year based on the following four principles:

- 1. teamwork,
- 2. agreed-upon expectations,
- 3. continuous improvement & innovation, and
- 4. people growth.

As part of this evaluation, I submit the Library's accomplishments for each 6-month period to David Hiebert as the subtask manager. At the same time other SSI organizations and contractors submit their input to the Air Force.

After contractors have presented their accomplishments, the Air Force determines the award fee rating. This rating determines what percentage of the award fee fund will be awarded to each contractor. The contractors share part of the award fee with employees. The better the company performs, the larger check the employees receive.

The Air Force empowers contractors to make decisions and take reasonable calculated risks to get the best job done. They also encourage frequent communications. I inform David regularly about ongoing activities, major policy issues, and problems which cannot be resolved within the Company.

SSI has purchasing responsibilities for most of the purchasing at AEDC. This is an important advantage for the Air Force because the contractor is bound by fewer purchasing requirements. This means less paperwork and faster service. I am part of this purchasing process by serving as buyer for all AEDC publications.

I am sure some of you are curious how we handle classified information. The Technical Library belongs to the Commander at AEDC. SSI is authorized to operate and maintain the Library with all information the Commander deems necessary for the effective performance of the AEDC mission. The Commander authorized the Library to have classified reports to the Secret level; limited documents such as Competition Sensitive; and special types of information such as CNWDI and WNINTEL.

Our security procedures are based on the DoD Industrial Security Manual, Air Force security requirements, and contractor security requirements. These are more stringent than those for government employees and require more paperwork. This does not bother me because the paperwork makes me feel more secure in handling classified information.

Dissemination of information is based on the above requirements and input from the Scientific and Technical Information Officer (STINFO).

On rare occasions, there are reports we don't have access to. In these cases, the Air Force obtains them.

The Library is a registered DTIC user accessing the basic DTIC DROLS dial-up system. Air Force personnel handle the work units responsibility.

We are authorized to obtain documents to the Secret level. Classified documents are sent to the Library through SSI Security. After ensuring proper clearance and "need-to-know" authorization, documents are sent to specific Air Force offices or contractor document control offices as relevant.

Limited documents marked "U.S. Government Agencies Only" and "DoD Only" are done through the subtask manager's account and are distributed according to security regulations and STINFO requirements.

We have found that these security procedures are working well.

Another question I am sure you want to know is, "What happens when contractors change?"

Every employee writes a resumé and submits it to the new contractor. We have not had to worry about personnel changes in the Library. Remember the new contractor will be heavily dependent on current employees to operate the contract. Generally only high level managers change. Even some of the incumbent managers are hired by the new contractor.

The Air Force requires employee benefits to be rolled over to the new company so you retain your sick leave, vacation, and pension benefits. I realize this would vary if you go from a civil service position to a contractor position.

To prepare for the changeover, a complete classified reports inventory is required. However, only a sample inventory of the open literature collection is required.

In summary, the Air Force and contractor operations at AEDC have been successful for over 40 years and TEAM AEDC is enabling a cultural transformation that will continue to make AEDC a national and international asset.

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## MAKING THE VIRTUAL LIBRARY A REALITY: ONE ORGANIZATION'S APPROACH TO CREATING A LIBRARY WITHOUT WALLS

Roderick D. Atkinson Murray L. Bradley Laurie E. Stackpole Naval Research Laboratory, Washington, DC

### **SUMMARY**

The Ruth H. Hooker Research Library and Technnical Information Center is at the forefront in implementing services and systems to help the staff of the Naval Research Laboratory (NRL) successfully adopt new technologies that support information access.

Among its innovative services are a Microcomputer Software Support Center that assists both scientists and administrators in identifying, evaluating, selecting, and implementing computer systems and applications; an optical imaging system, seamlessly linked to a pre-existing online catalog, for the storage, retrieval, online display, and printing of materials from the Library's collections; and a campuswide information system, the InfoNet, that provides end-users with access to a broad spectrum of local and remote information sources from their in-office desktop computers or terminals.

The Library is currently forging agreements with scientific societies and other publishers to test the feasibility of providing network access to journals in electronic formats. Recent articles in *Science, Internet World*, and *Government Computer News* have cited NRL as an example of the "virtual library" in action.

## **NRL Environment**

- Main Campus Washington, D.C.
- 3,500 Federal Employees [1,600 Scientists and Engineers]
- 1,200 On-site contractors
- 130-acre Campus
- 116 Buildings
- Campus Network on Internet
- Other Locations:

Orlando, FL Bay St. Louis, MS Monterey, CA

## **Library Environment**

- 150,000-volume Research Collection
- 300,000 Cataloged Reports
  - · 60,000 Stored Electronically
- 1,000,000 Reports on Fiche
- 1,200 Current Journal Subscriptions
- Emphasis on Physics and Chemistry
- Online Reports Catalog [STAR]
- Networked Book Catalog [STILAS]
- Reference Use of DIALOG, STN, DTIC
- Microcomputer Software Support Center
- InfoNet Campus-wide Information System
  - · CD-ROM Databases for End-users
  - Laboratory MIS Databases
  - · Library Catalogs, Databases
  - · Preprogrammed Internet Connections

# Library Electronic Information Dissemination Efforts

- Supported by Top NRL Management Director of Research
- Cooperation from Technical Divisions RCD, ITD, TID
- Government, Academia, Associations, Publishers and Corporations During FY Visited by 30 Organizations Representing Military,
- Published 2 Journal Articles (on InfoNet and Optical System) During FY Library Staff Presented Papers at 10 Meetings;
- Library's Virtual Library Efforts Were Subject of Recent Articles in Internet World and Government Computer News; Cited in Science
- Collaboration with: ONR, DTIC, APS, AIP, Tech Connect, Phillips

# Tradition of Technological Innovation

· Citation Analysis for Journal Selection - Ruth H. Hooker 1935

 In-house Journal Indexing/Abstracting 40's-60's

· Punched Card Batch Circulation System Late 60's

· Computer Tapes for Customized Bibliographies

Early 70's · Searching of Online Databases

Early 80's • Integrated Online Library Catalog

• Network/Dial-in Access to Catalog

1986 • Automated Reports Catalog

# Recent Technological Innovation

· Lending of Microcomputer Software

· CD-ROMs for End-user Searching in Library

Microcomputer Software Support Center

Optical Disks for Reports Storage

The InfoNet Campus-wide Information System

· FTP Server for Software/Document Dissemination

• Third-generation Catalog (STILAS)

· Journal Reprints Available on Optical System

## Library Support for Microcomputing

· Users Articulated Need for Help in Identifying and Evaluating S/W

· Acknowledged Library's Role as the Lab's Information Provider

· Needed More Than Articles, Reviews and Database Searches

· Proposed to Computer Policy Panel That Library Expand Role

· Computer Policy Panel Endorsed Concept, Gave Library Go Ahead

Library Response Was

· A Software Lending Program for Dos and Macintosh Systems

· Specialized Reference Staff - Computer 'Gurus'

· Creation of a Microcomputer Software Support Center

# Microcomputer Software Support Center

· Opened September 1989 with Ribbon-Cutting by C.O.

User Services

Ready Reference and Research Information Sources (CD-ROM) Reading Room User Evaluation Lab Hands-on Advice/Instruction Help Desk for Problem Solving In-office Troubleshooting

· Support for Software Lending

Back-up Copies
Spec Sheets
Virus Scanning
Printed Directory
Recommendations on purchases, upgrades

# Software Support Positioned Library for Electronic Age

## Shift in User Perception

- · Erased Distinction Between Print-based and Digital Information
- · Library Identified Lab-Wide As Source for Electronic Information
- · Demonstrated That Library Was Knowledgeable About Automation

## Shift in Staff Competencies

- · Micro Center Staffed by Systems Analysts with Computer Expertise
- · In-house Support for Planning, Implementing, Maintaining Systems

## Result

- · Library Tapped for Working Group to Plan Fiber Optic Network
- · Mandate Issued to Develop Campus-wide Information System

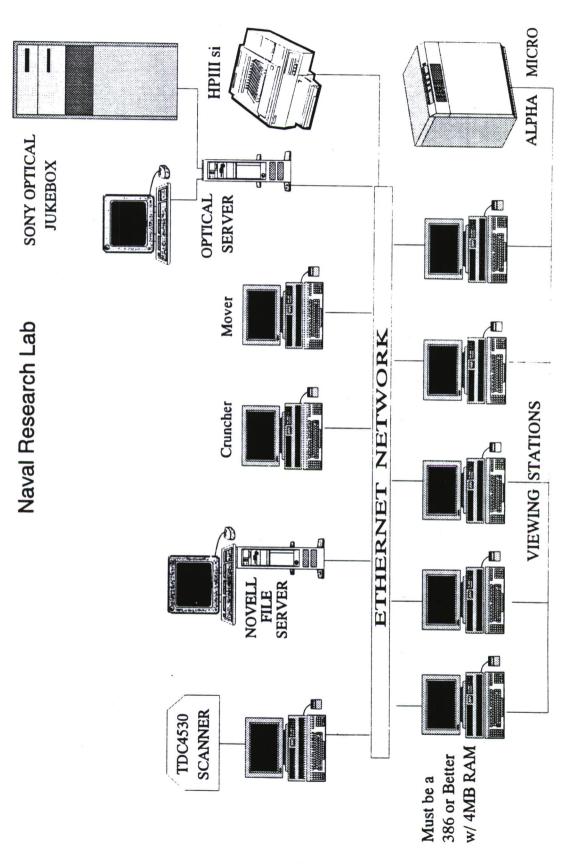
## Report Collections in the NRL Library

- 150,000 Unclassified Reports (No Security Restrictions)
- · Issued by Government, Academia, Industry
- · 16,000 Authored or Co-authored by NRL Scientists
- · Average Report Size 55 Pages
- 100,000 Classified Reports (With Security Restrictions)
- · Produced by Government and Government Contractors
- · Average Report Size 100 Pages

# Early Library Use of Optical Technology

- Began in 1989 Custom-designed Prototype System
- Implemented Primarily Because of Space Limitations
- Initially Considered An Alternative Storage Mechanism
- Reports Retrieved From Disk Instead of Shelf
- Search Performed in STAR Reports Catalog
- · Accession Number Entered at Optical Workstation
- · Report Read Online or Printed On-Demand

## OPTICAL DISK SYSTEM CONFIGURATION



Revised April 26, 1993

## DocuScan DS-4530 Scanner

- 40 Sheets/minute
- Scans Both Sides at Once
- Sheet Fed or Manual Operation
- 300 dpi
- CCITT Group IV Compression
- Equipped with Preview Monitor
- Offers "Endorser" Capability

## Sony Autochanger

- About the Size of a Refrigerator
- · Holds 50 12-inch WORM Disks
- Each Disk Holds 6.5 GB (130,000 Typed Pages)
- 1 Autochanger Stores 500 File Cabinets
- Autochangers Can Be Daisy Chained

## WRITABLE OPTICAL DISK 6.5 GB Media Comparison Chart 5 1/4 FLOPPY HIGH DENSITY 1.2 MB 3 1/2 FLOPPY HIGH DENSITY 1.44 MB (5417)(4513)8MM TAPE 2.3 GB CD-ROM 650 MB (3)

# Key Points in NRL Decision on Separate Index

- Wanted Most Straightforward and Expeditious Approach
- Library Had Cataloged Reports in Cuadra STAR since 1987
- Many Reports to Be Scanned Were Already Fully Searchable
- Over 100 Fields Available in STAR
- · Keyword, Field and Boolean Search Capabilities
- A Separate Indexing System Offered Flexibility
- Once Index Is Placed on Disk It's There to Stay
- With STAR, Could Add Fields or Make Global Changes
- Could OCR Report Images Later, Add Full Text To STAR
- Separate Systems Could Be Linked So They Look Like One

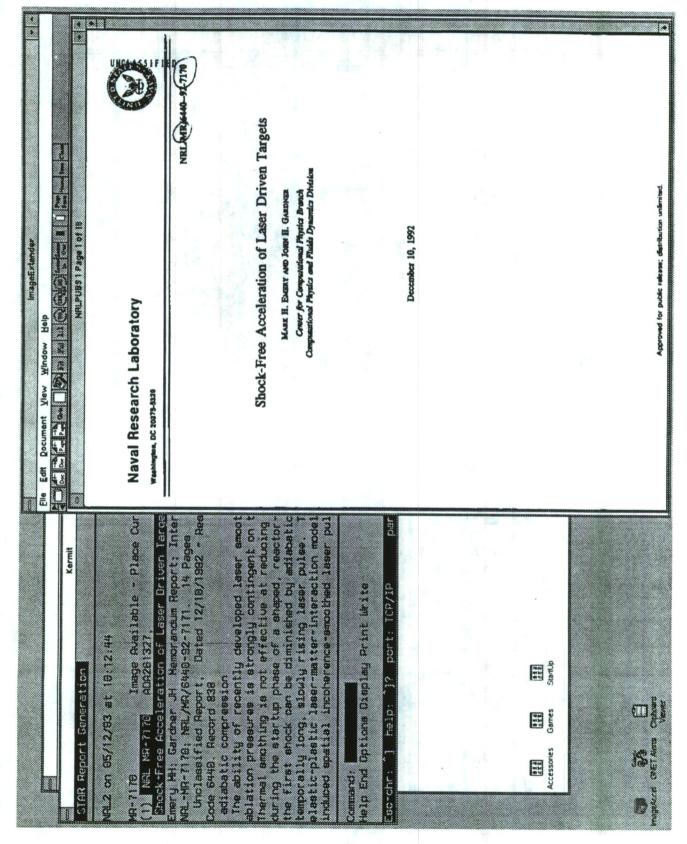
## Conversion Process

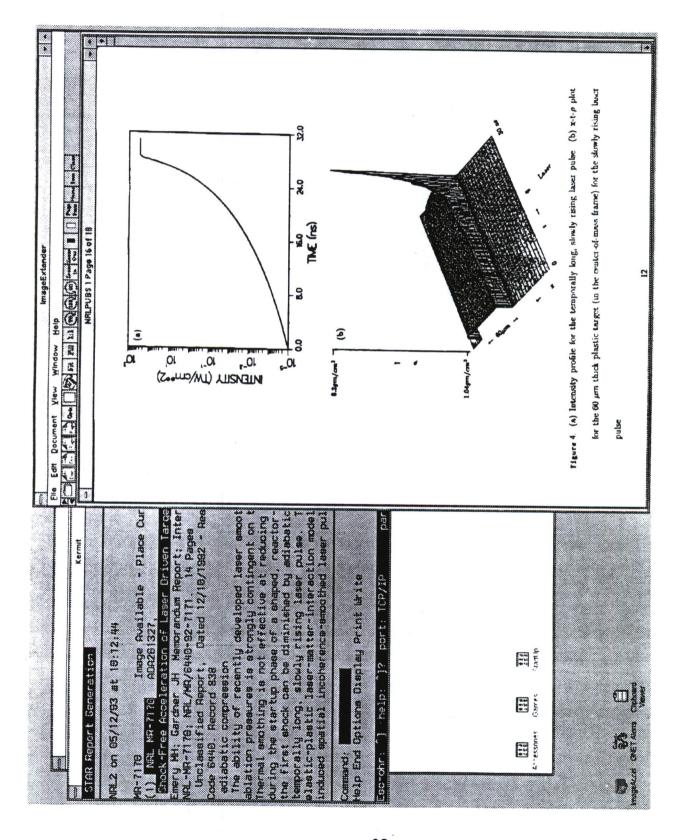
- Document Preparation
- Remove Blank Pages
- **Explode and Trim**
- Cut Oversize to 8½ x 11
- Remove Loose Color Pix
- · Bar Code Reports
- · Scanning
- · Sheets Fed Continuously
- · Scanner Reads Bar-coded Report Numbers
- Quality Control
- · Scanned Images Checked Electronically
- Manual Spot Check of Stored Images
- Reports Take One-way Trip to Scanner

## Retrieving Report Images

- User Searches Online Reports Catalog (STAR)
- · Optically Stored Images Have Been Linked to STAR
- · Link Is Unique Bar-Coded Accession Number
- · Linking Software is Cambridge "Image Extender"
- · Cursor in STAR Accession Number Field Retrieves Image

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## Viewing or Printing Images

Images Are Decompressed at Workstation

· Images Can Be Enlarged, Rotated, Reversed

· Images Can Be Read at Workstation

· Pages Can Be Printed at 17 Pages/Minute

## Options for Indexing Images

Index Terms Recorded on Disk During Scanning Process

· Full Text Recorded on Disk (OCR Document or Image)

• Images Linked to Separate Index - NRL Approach

VOI CE: 282-484-7148 Assistance - EMAIL: infonet@library.nrl.navy.mil -NRL Library Network - InfoNet A) Information Resources (CD-ROMs)

B) Electronic Books ...

C) NRL Library Catalog

D) Internet Resources ...

E) LABMIS InfoNet Main Menu F) Notices/Help/Training ... 6) User Registration H) LOGOUT Enter

NRL Library Network - InfoNet	Electronic Books	A) National Information Infrastructure: Agenda for Action  (b) National Performance Review  (c) Zen & the Art of the Internet	D> Previous Menu	Enter Esc=Previous		- ENAIL: infonet@library.nrl.navy.mil - VOICE: 202-404-7148
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NRL Library Network - InfoNet	National Performance Review	B) Chapter 1 C) Chapter 2 D) Chapter 3 E) Chapter 4 F) Conclusion En G) Appendix A H) Appendices B & C I) Remarks by the President & Vice-President J) Press Briefing on Reinventing Govt. K) Background Briefing Enter Esc=Previous	
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# Library Systems: Summary

### The InfoNet

- · Provides Information to Researchers where and when they want it.
- · Currently Limited to ASCII Text

## Optical Disk Imaging System

- · Provides the Full Text, Equations, Graphs and Charts
- · Currently Limited to the Library

### Wanted

Desktop Access to All the Information Contained in a Document

## World-Wide Web (W3)

What is World-Wide Web?

It is a global hypermedia information retrieval initiative aimed at providing universal access to a large universe of multimedia documents.

has spread Research in W3 began at CERN in Switzerland but interest across the globe.

NCSA Mosaic Client Software

From the National Center for Supercomputing Applications (NCSA)

Software for X-Windows Systems, Macintosh and MS Windows

Host HTTP (HyperText Transport Protocol) Server Software Available for Multiple UNIX Platforms

Source and executable binary available; anonymous FTP: **FTP.NCSA.UIUC.EDU**.

Software is copyrighted but free for academic and research use



NCSA Mosaic Home Page for Macintosh Welcome to the NCSA Mosaic Home Page for Macintosh. The current version of NCSA Mosaic for Macintosh is **B2** (Beta 2).

NCSA Mosaic is copyrighted by the University of Illinois.

This page contains Macintosh specific links. These documents are intended to showcase the features of Mosaic for Macintosh. Those features which can be played only on the Macintosh will be followed by an ONLY.

A new feature for Beta 1 is "Mail to Developers". For us to be able to respond to your mail, PLEASE set your name and email address in the preferences under the options menu.

For new users.... In order for NCSA Mosaic for Macintosh to function properly you will need a series of "External Viewers". These viewers allow Mosaic to display file types which are not built into Mosaic itself. References to what viewers and where to find them can be found on the Setup-Mac Document. Simply click on the link (below) for more information.

### Software Specs

- · Setting Up Mosaic
- Features
- Mosaic Documentation
- · Recommended Document Format Specs
- Upgrade Announcements
- Other Useful Applications
- · Known Buas

### Cool Macintosh Features

NCSA Mosaic for Macintosh is designed to support many Apple

### From Red Tape to Results Creating a Government That Works Better & Costs Less

Report of the National Performance Review Vice President Al Gore, September 7, 1993



Statement by the President (audio)





### The National Performance Review

### **Supporting Materials to the Review**

Remarks by the President and Vice-President in presenting the National Performance review

Initial Announcement of the organization of the NPR

Background Briefing by Senior Administration Officials

Remarks by the President and Vice-President at the GSA Warehouse

Press Briefing on Reinventing Government with David Osborne and John Sharp

Ash Recievers, Tobacco (Desk type)

Letter to the president

### Conclusion

## The Virtual Library

- · Easy Identification of Appropriate Information Sources
- · Access to Information in all Formats: Text, Graphics, Charts...
- · Availability Whenever and Wherever the User needs it

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### CLASSIFICATION STANDARDS FOR LIBRARIANS AND LIBRARY TECHNICIANS

### Raymond Crosby, Consultant University of Florida

### Workshop/Presentation Outline

- General Introduction Questions:
  - How many of you are familiar with the Federal Position Classification System?
  - How many of you are familiar with the Factor Evaluation System?
  - How many of you are supervisors of other professionals?
  - How many of you supervise library technicians?

### SECTION I, OVERVIEW OF THE GRADE DETERMINING PROCESS

### (Approx. 1 hour) (0830-0930 hours)

- Introductory Remarks:
  - New OPM standards for Technicians have been issued. Other standards for Librarians and Technical Information Specialists have been developed but publication of these standards has been delayed due to a total review of the occupational standards program. [Discussions continue with OPM officials and will until standards are published.]
  - The new document for Library Technicians attempts to describe functions and operations of such work as it exists in the 1990s, a far different picture than the 1960s.
  - The Standards describe, albeit briefly, the impact of automation on Library and Information Center functions which has occurred over the last 27 years.

- OPM Personnel Terms and Concepts Described:
  - Classification Standards -

CONTROLLING GUIDES USED TO GRADE POSITIONS (OH)

Qualification Standards -

CONTROLLING GUIDES USED TO ASSURE THAT CANDIDATES MEET THE APPROPRIATE EDUCATION, TRAINING, AND EXPERIENCE FOR FEDERAL POSITIONS

Legal basis for standards 1923/1949 -

"CLASSIFICATION ACTS" - NOW PART OF TITLE 5, U.S. CODE (OH x 4)

- Occupational Groups (e.g., Library and Archives Group, GS-1400)
- Occupational Series (e.g., Librarian Series, GS-1410)
- Occupational Standards
- Broad-based classification guides
- The establishment of the Factor Evaluation System and the Primary Standard (1977) as a result of a Congressional Commission Congress ordered the OPM to revise the format of classification standards to assure consistency and equity across occupational lines
- The position description ALLOCATES GRADES FOR POSITIONS, NOT NECESSARILY THE PERSON OCCUPYING THE POSITION (OH x 2)

### <u>Duties</u>

- Major Duties
  - OCCUPIES A SIGNIFICANT AMOUNT OF THE TIME OF THE INCUMBENT (10% OR MORE) (OH)

OR

- GOVERNS THE QUALIFICATION REQUIREMENTS OF THE POSITION
- Minor Duties

INCIDENTAL OR MISCELLANEOUS DUTY OR RESPONSIBILITY DOES NOT AFFECT QUALIFICATION REQUIREMENTS AND DOES NOT OCCUPY A SIGNIFICANT AMOUNT OF WORK TIME (OH)

Q & A regarding overview, general OPM terms regarding position classification and classification standards

### THE FACTOR EVALUATION SYSTEM

THE NINE FES FACTORS: (OH)

Knowledge - REQUIRED TO BE UTILIZED

Supervisory Controls -

HOW WORK IS ASSIGNED THE EMPLOYEES RESPONSIBILITY REVIEW OF THE WORK

Guidelines -

NATURE OF GUIDES
JUDGMENT NEEDED TO APPLY GUIDES

Complexity -

NATURE OF ASSIGNMENT DIFFICULTY IDENTIFYING NEEDS ORIGINALITY INVOLVED

Scope and Effect -

PURPOSE OF THE WORK
IMPACT OF THE PRODUCT OR SERVICE

Personal Contacts -

PEOPLE CONTACTED

Purpose of Contacts -

REASONS FOR CONTACTS

Physical Demands -

NATURE, INTENSITY OF PHYSICAL ACTIVITY

Work Environment -

RISKS AND DISCOMFORTS IMPOSED

Q & A, Discussion of the FES Factors

- STATUS OF PROPOSED STANDARDS
  - FLICC Personnel Working Group (RC to discuss workings of the PWG, with audience input) - Comments were sent to OPM in April 1993 for all three standards, as well as other material regarding qualification requirements for Professional Librarian positions
  - Agency Personnel Offices
  - Comments from other interested parties sent to OPM in April 1993
  - Final action has been obtained on the technician standard. Work has been delayed on 1410 and 1412 standards
  - Discussion held at OPM by FLICC/PWG and top OPM career officials on November 10, 1993
  - Once published, agencies normally have 6 months to implement new standards
  - FLICC/PWG continues to monitor OPM progress and discuss issues directly with OPM officials

THE CLASSIFICATION PROCESS (Assuming FES [or a modified FES] will be used for all positions)

• Steps to be utilized to classify Librarian, Library Technician, and Technical Information Specialist positions using the Factor Evaluation System

### (NEED FOR LIBRARIANS TO TAKE AN ACTIVE ROLE IN THE PROCESS)

- Describe major duties
- Describe the nine factors BE SURE TO INCLUDE INFORMATION REGARDING THE SUB-FACTORS!
- Relate factors to factor level descriptions in the OPM standard
- Obtain a point total and a grade related to that total

### HANDOUTS -- BRIEF DISCUSSION

- #1 OPM INSTRUCTION FOR THE FES (PRIMARY STANDARD; TS 27)
- #2 OPM PUBLICATION HOW TO WRITE POSITION DESCRIPTIONS UNDER THE FES (PS-27)
- #3 a. Tools of the system
  - b. Typical Factor-level relationships GS-4 GS-8
  - c. Typical factor-level relationships GS-9 GS-14
  - d. FES numerical values

### **BREAK**

### SECTION II, WORKSHOP ACTIVITIES (Re GS-1411; APPROX. 30 MINUTES)

- HANDOUTS: GS-1411 Standard (August 1993)
  Position Descriptions "A" "B" "C"
- Discussion using the Factor Evaluation System for: Library Technician, GS-1411

### HAVE PARTICIPANTS LOOK AT THE NEW TECHNICIAN STANDARD, GS-1411

### USING THE DOCUMENT, CONDUCT A BRIEF DISCUSSION OF THE SERIES DEFINITION, EXCLUSIONS, OCCUPATIONAL INFORMATION, GRADING

### FACTORS LEVELS:

- 1-2 AID TYPE POSITIONS THRU GS-3
- 1-3 GS-4/5
- 1-4 GS-5/6
- 1-5 GS-7/8
- 2-1 AIDS AT GS-2/3
- 2-2 GS-3/4
- 2-3 FULL PERFORMANCE, GENERALLY GS-5/ABOVE
- 3-1 TRAINEE
- 3-2 INTERMEDIATE MOST FALL IN THIS CATEGORY
- 3-3 SENIOR MOST AT GS-7/ABOVE
- 4-2 TRAINEES AND LADDER JOBS UP TO GS-4
- 4-3 GS-5/ABOVE
- 5-1 UP TO GS-3
- 5-2 GS-4/5/6
- 5-3 SENIOR TECHNICIANS
- 6-1 TRAINEE
- 6-2 FULL PERFORMANCE FOR MOST TECHNICIANS
- 6-3 IF WORKING OUTSIDE THE UNIT WITH VENDORS, THIS LEVEL SHOULD BE CONSIDERED
- 7-A TO EXCHANGE INFO ONLY
- 7-B TO PLAN AND COORDINATE WITH COOPERATIVE PERSONS
- 8-1 LIBRARY/OFFICE SEDENTARY WORK
- 8-2 SOME PHYSICAL EXERTION
- 9-1 LIBRARY/OFFICE SETTING, SOME TRAVEL
- 9-2 SPECIAL SAFETY PRECAUTIONS (HOSPITALS, PRISONS)
- Discussion/audience participation in evaluating positions "A", "B", "C".
- HANDOUTS EVALUATION REPORTS FOR A, B, C

### **30 PLUS MINUTES**

### SECTION II (continued), WORKSHOP ACTIVITIES (re GS-1410; TIME REMAINING)

 Discussion using the Factor Evaluation System as it relates to Librarian Positions

### USE HANDOUT - INSTRUCTIONS FOR THE FACTOR EVALUATION SYSTEM TS - 27, MAY 1977

### REMEMBER - THIS IS NON-SUPERVISORY VALUATIVE CRITERIA BUT IS ALSO USED FOR EVALUATION OF MIXED POSITIONS

### Factor 1 - Knowledge Required

- 1-6 MLS (GS-9 IN MOST CASES)
- 1-7 MLS/PhD or EXPERIENCE (GS-11/12)
- 1-8 RECOGNIZED EXPERT (GS-13/14)
- 1-9 NATIONAL/INTERNATIONAL EXPERT (RARE)

### Factor 2 - Supervisory Controls

- 2-2 INTERN
- 2-3 FULL PERFORMANCE
- 2-4 SENIOR
- 2-5 EXPERT/LIBRARIAN IN CHARGE (NON-SUPVY)

### Factor 3 - Guidelines

- 3-2 INTERN
- 3-3 FULL PERFORMANCE
- 3-4 SENIOR, CONSIDERABLE JUDGMENT RENDERED
- 3-5 EXPERT/DEVELOPER OF GUIDES TO BE USED SYSTEM-WIDE

### Factor 4 - Complexity

- 4-3 INTERN
- 4-4 FULL PERFORMANCE
- 4-5 SENIOR/EXPERT NORMALLY GS-13 OR ABOVE
- 4-6 NATIONAL/INTERNATIONAL ACTIVITIES

### Factor 5 - Scope and Effect

- 5-2 INTERN
- 5-3 FULL PERFORMANCE
- 5-4 SENIOR, WIDE RANGE OF AGENCY ACTIVITIES
- 5-5 NATIONAL/INTERNATIONAL ACTIVITIES

### Factor 6 and Factor 7 - Personal Contacts and Purpose of Contacts

- 6-2 INTERN/SMALL BRANCH FUNCTIONS
- 6-3 FULL PERFORMANCE IN MOST INSTANCES
- 6-4 VERY SENIOR LIBRARIANS
- 7-A EXCHANGE INFORMATION
- 7-B PLAN AND COORDINATE WORK WITH FULLY COOPERATIVE PERSONS
- 7-C INFLUENCE, MOTIVATE, NEGOTIATE
- 7-D JUSTIFY, DEFEND SIGNIFICANT, LONG-RANGE, CONTROVERSIAL ISSUES

### Factor 8 - Physical Demands

- 8-1 LIBRARY/OFFICE WORK
- 8-2 SOME INCREASED PHYSICAL EFFORT

### Factor 9 - Work Environment

- 9-1 LIBRARY/OFFICE SETTING
- 9-2 SPECIAL SAFETY PRECAUTIONS

### SECTION III, WRAP-UP (Time remaining)

- Reintroduce the classification system and the Factor Evaluation System
- Q&A
- Close-out

### HANDOUTS ACCOMPANYING CLASSIFICATION STANDARDS FOR LIBRARIANS AND LIBRARY TECHNICIANS

Position "A"
LIBRARY TECHNICIAN (OFFICE AUTOMATION)
GS-1411-XX

### **Background**

The position is located in the Interlibrary Loan Unit of a large Special Library. Incumbent serves as a library technician performing a variety of duties in support of the Unit.

### <u>Duties and Responsibilities</u>

A variety of work is performed which requires knowledge of library organization and interlibrary loan activities in the Library. Time devoted to individual tasks varies with workload requirements.

Specifically, the incumbent performs the following duties:

- 1. Processes incoming books and photocopies of articles received in the Interlibrary Loan Unit for clientele. This includes retrieving appropriate records from pending files, notifying patrons of the availability of books in the Unit or mailing the photocopies, recalling overdue items, and returning books to lending institutions.
- 2. Determines availability of requested documents in the Library as well as other libraries throughout the world. This involves using the Library's online catalog, and online databases supplied by Online Computer Library Center, Inc., and others.
- 3. Performs final bibliographic searches for items not found in the Library by other Unit staff before declaring the items missing and initiating the interlibrary loan process.
- 4. Generates interlibrary loan requests for documents via such entities as the OCLC-Interlibrary Loan Subsystem, with assistance of senior Unit staff as necessary.
- 5. Processes interlibrary loan requests received at the Library from other institutions. The requests are received by mail or the OCLC-Interlibrary Loan Subsystem. This assignment requires using the Library's only catalog to determine availability of materials, checking for copyright compliance, and charging and discharging materials loaned. Updates online records to reflect the current status of loans.

- 6. Assists with data entry to maintain statistics and to keep records of completed interlibrary loan transactions.
- 7. Receives telephone calls and visitors and, based on knowledge of office activities, furnishes requested information or refers caller to supervisor or appropriate staff member.
- 8. Explains interlibrary loan policies and procedures to agency staff when appropriate.

Performs other duties as assigned.

### Factor 1, Knowledge Required by the Position

- Knowledge of a wide variety of standard rules, procedures, and operations required to perform the full range of clerical procedural tasks in the Library, including searches of the Library's extensive online catalog, and numerous other databases.
- Skill as a qualified typist, and ability to use word processing equipment and programs.
- Ability to work with a computer terminal to search for requested materials.
- General knowledge of the library collections and classification systems used by the Library.
- Ability to interact effectively with patrons and with other library staff, using tact and courtesy to accomplish assigned work.
- Knowledge of filing and specialized terminology sufficient to accomplish the work.

### Factor 2, Supervisory Controls

The Head, Interlibrary Loan Unit, makes assignments in terms of objectives, priorities, and deadlines; and assists the incumbent with difficult problems which involve Library policy or which do not have clear precedents. The incumbent plans and carries out the successive steps of the work to final results, handling problems by following established methods and techniques and using standard procedures to produce desired results. Work methods are not reviewed in detail. Completed assignments are subject to review for appropriateness, technical soundness, and conformity with Library policy for interlibrary loan activities.

### Factor 3, Guidelines

Guidelines include written policies and established practices developed for the unit by the agency and/or the Library Branch, the American Library Association, and other association rules and procedures for Interlibrary Loans, U.S. statutes such as those pertaining to the Privacy Act, Copyright Law, and the Freedom of Information Act. Numerous standard tools and specific guidelines are available for most work. The incumbent uses judgment in locating and selecting the most appropriate guides for specific requests, and in recognizing and referring to higher graded workers or the supervisor, work requiring significant deviation from standard procedures.

### Factor 4, Complexity

The work consists of a varying sequence of detailed, routine, and non-routine library technician operations of limited scope and difficulty. The incumbent performs a variety of related steps following prescribed or standardized instructions in the Interlibrary Loan Unit. The decisions regarding what needs to be done require the incumbent to use judgment in applying a substantial number of pertinent rules, regulations, and instructions.

### Factor 5, Scope and Effect

The purpose of the work is to provide documents and materials to patrons by using a range of standard library and information services tools and techniques. The provision of appropriate library materials supports the needs of the library patrons and affects the accuracy and completeness of their work.

### Factor 6, Personal Contacts

Personal contacts are with professional and administrative employees, as well as library personnel in other libraries. Contacts are established on a routine basis but may require the incumbent to determine what is needed and whether the person is entitled to the material requested.

### Factor 7, Purpose of Contacts

The purpose of the contacts is to obtain and provide bibliographic information and materials to Library clientele.

### Factor 8, Physical Demands

Work is sedentary when filing, typing, or processing materials. However, the work requires frequent extensive physical exertion in the need for the incumbent to walk, stretch, bend, stoop, or reach for materials, as well as to push book trucks or similar equipment in locating requested materials.

### Factor 9, Work Environment

The work is normally performed in a library or office setting.

### POSITION EVALUATION REPORT

### STANDARDS APPLIED:

This position description has been evaluated using the OPM classification standards for the Library Technician Series, GS-1411, August 1993.

### POSITION TITLE, SERIES, AND GRADE:

Library Technician (Office Automation), GS-1411-05

### **BACKGROUND:**

This is a Library Technician position in the Interlibrary Loan Unit of a large Special Library, established to perform the full range of clerical procedural work in the Unit.

### SERIES AND TITLE DETERMINATION:

The work of the position includes clerical, para-professional, technical, and library assistance work in the Interlibrary Loan Unit. The work includes duties which, if performed satisfactorily, will result in promotion in a career ladder in technical library work in the Interlibrary Loan Unit, which at more advanced levels, requires a practical knowledge of ILL functions and services as practiced at the Special Library, and the ability to apply standard library tools, methods, and procedures to the work. The foregoing clearly indicates that the basic appropriate title and series is Library Technician, GS-1411. Since the duties require skill in work processing and use of other office automation equipment, the parenthetical designation "office automation" is added.

### **GRADE DETERMINATION:**

### Factor 1 - Knowledge Required - Level 1-3 - 350 Points

The position under consideration requires knowledge of rules, procedures, and operations of the full range of clerical support work in the Interlibrary Loan Unit and ability to work with a computer terminal to search a limited number of databases for materials requested by patrons. These knowledges and skills are typical of factor level 1-3.

### Factor 2 - Supervisory Controls - Level 2-3 - 275 Points

The supervisor provides general direction on objectives, deadlines, and priorities and may assist with matters which do not have clear precedents. The incumbent plans and carries out successive steps of the work. Completed work is evaluated for appropriateness and conformity with overall requirements. This is typical of factor level 2-3.

### Factor 3 - Guidelines - Level 3-2 - 125 Points

Guidelines at this level include numerous standard rules, procedures, and instructions. The incumbent must use judgment to select the most appropriate procedure and correctly apply the most appropriate guideline for the specific task as well as recognize when to refer matters to the supervisor or higher graded worker for resolution of appropriateness of procedural details. This is typical of level 3-2.

### Factor 4 - Complexity - Level 4-2 - 75 Points

Work consists of varying sequences of detailed library technician operations of limited difficulty. Related steps of the work are performed following standard ILL instructions. Decisions to decide what needs to be done require the employee to use judgment in selecting and applying the most applicable rule, regulation, or instruction. Level 4-2 is met.

### Factor 5 - Scope and Effect - Level 5-2 - 75 Points

The purpose of the work is to provide documents and materials to patrons using various search techniques. The materials provide support for the needs of patrons and assist in the accuracy and completeness of their work. This clearly equates to factor level 5-2.

### Factor 6 - Personal Contacts - Level 6-2 - 25 Points

Contacts are with various professional, technical, and administrative patrons, on a routine basis, in a library setting. This equates to level 6-2.

### Factor 7 - Purpose of Contacts - Level 7-a - 20 Points

The purpose of the contacts is to obtain and provide information to co-workers and Library patrons.

### Factor 8 - Physical Demands - Level 8-2 - 20 Points

The work often requires extensive physical exertion in the need for the incumbent to walk, bend, stoop, and reach for materials, push book carts, and other similar physical activities.

### Factor 9 - Work Environment - Level 9-1 - 5 Points

The work is normally performed in a library/office setting.

### **CONCLUSION:**

Application of the above cited document, coupled with the qualifications requirement for office automation equipment proficiency, result in a classification of Library Technician (Office Automation), GS-1411-05.

Position "B"
LIBRARY TECHNICIAN (OFFICE AUTOMATION)
GS-1411-XX

### **Background**

The position is located in the Interlibrary Loan Unit of a large, Special Library. Incumbent serves as a library technician performing a variety of duties in support of the Unit.

### Duties and Responsibilities

A variety of work is performed which requires basic knowledge of library organization and interlibrary loan activities, as well as typing and clerical skills. Time devoted to individual tasks varies with workload requirements.

Specifically, the incumbent performs the following duties:

- 1. Performs preliminary processing of incoming loan and photocopy requests and sorts requests to facilitate locating documents in the Library. Locates requested items and delivers them to designated areas for copying or loan.
- 2. Searches the Library's online catalog to determine reasons for not filling requests from the collection. Makes appropriate notations of search results on the back of each request form.
- 3. Corrects incomplete or inaccurate bibliographic citations by checking author indexes of indicated volumes or years.
- 4. Assists with data entry to maintain records of completed interlibrary loan transactions.
- 5. Photocopies requested articles as necessary.
- 6. Performs bibliographic searching and document photocopying. Publications searched include periodicals, congresses, proceedings, and monographic series written in over 25 different languages.
- 7. Receives telephone calls and visitors and, based on knowledge of office activities, furnishes requested information or refers call to supervisor or appropriate staff member.
- 8. Provides daily statistics of various activities.

### Factor 1, Knowledge Required by the Position

- Knowledge of a wide variety of standard rules, procedures, and operations required to perform the full range of clerical procedural tasks in the Library, including searches of an in-house catalog and other databases.
- Skill as a qualified typist, and ability to use word processing equipment and programs.
- Ability to work with a computer terminal to search for requested materials.
- General knowledge of the library collections and classification systems used by the Library.
- Ability to interact effectively with patrons and with other library staff, using tact and courtesy to accomplish assigned work.
- Knowledge of filing and specialized terminology sufficient to accomplish the work.

### Factor 2, Supervisory Controls

The Head, Interlibrary Loan Unit, provides continuing or individual assignments by indicating what is to be done, the priorities, and the deadlines. Detailed instructions are provided where assignments are unique and/or require changes in established instructions. The incumbent independently performs work within established operating instructions, procedures, and precedents. Unusual requests are referred to supervisor or more experienced worker for resolution. Completed work is reviewed for accuracy, adequacy of search procedures, conformity with ILL practices, and other pertinent Library standard operating procedures.

### Factor 3, Guidelines

Guidelines include written policies and established practices developed for the unit by the agency and/or the Library, the American Library Association, and other association rules and procedures for Interlibrary Loans, U.S. statutes such as those pertaining to the Privacy Act, Copyright Law, and the Freedom of Information Act. Numerous standard tools and specific guidelines are available for most work. The incumbent uses judgment in locating and selecting the most appropriate guides for specific requests and in recognizing and referring to higher graded worker or the supervisor work requiring significant deviation from standard procedures.

### Factor 4, Complexity

The work consists of a varying sequence of detailed, routine, and non-routine library technician operations of limited scope and difficulty. The incumbent performs a variety of related steps following prescribed or standardized instructions in the Interlibrary Loan Unit. The decisions regarding what needs to be done require the incumbent to use judgment in applying a substantial number of pertinent rules, regulations, and instructions.

### Factor 5, Scope and Effect

The purpose of the work is to provide documents and materials to patrons by using a range of standard LIS tools and techniques. The provision of appropriate library materials supports the needs of the library patrons and affects the accuracy and completeness of their work.

### Factor 6, Personal Contacts

Personal contacts are with professional and administrative employees, as well as library personnel in other libraries. Contacts are established on a routine basis but may require the incumbent to determine what is needed and whether the person is entitled to the material requested.

### Factor 7, Purpose of Contacts

The purpose of the contacts is to obtain and provide bibliographic information and materials to Library clientele.

### Factor 8, Physical Demands

Work is sedentary when filing, typing, or processing materials. However, the work requires frequent extensive physical exertion in the need for the incumbent to walk, stretch, bend, stoop, or reach for materials, as well as to push book trucks or similar equipment in locating requested materials.

### Factor 9, Work Environment

The work is normally performed in a library or office setting.

### POSITION EVALUATION REPORT

### STANDARDS APPLIED:

This position description has been evaluated using the OPM classification standard for the Library Technician Series, GS-1411, August 1993.

### **POSITION TITLE, SERIES, AND GRADE:**

Library Technician (Office Automation), GS-1411-04

### **BACKGROUND:**

This is a Library Technician position in the Interlibrary Loan Unit of a large Special Library, established to perform a variety of moderately difficult library processing work in the Unit.

### SERIES AND TITLE DETERMINATION:

The work of the position includes clerical, para-professional, technical, and library assistance work in the Interlibrary Loan Unit. The work includes duties which, if performed satisfactorily, will result in promotion in a career ladder in technical library work in the Interlibrary Loan Unit, which, at more advanced levels, requires a practical knowledge of ILL functions and services as practiced at the Special Library and the ability to apply standard library tools, methods, and procedures to the work. The foregoing clearly indicates that the basic appropriate title and series is Library Technician, GS-1411. Since the duties require skill in word processing and use of other office automation equipment, the parenthetical designation "office automation" is added.

### **GRADE DETERMINATION:**

### Factor 1 - Knowledge Required - Level 1-3 - 350 Points

The position under consideration requires knowledge of rules, procedures, and operations of the full range of clerical support work in the Interlibrary Loan Unit and ability to work with a computer terminal to search a limited number of databases for materials requested by patrons. These knowledges and skills are typical of factor level 1-3.

### Factor 2 - Supervisory Controls - Level 2-2 - 125 Points

The Head, ILL, provides continuing or individual assignments indicating what is to be done, deadlines, and priorities. The technician independently performs recurring work, referring unusual matters to supervisor or higher graded worker. Completed work is subject to a thorough review for conformity with established work procedures. This level of supervisory control is clearly at 2-2 in the FES format.

### Factor 3 - Guidelines - Level 3-2 - 125 Points

Guidelines at this level include numerous standard rules, procedures, and instructions. The incumbent must use judgment to select the most appropriate procedure and correctly apply the most appropriate guideline for the specific task as well as recognize when to refer matters to the supervisor or higher graded worker for resolution of appropriateness of procedural details. This is typical of level 3-2.

### Factor 4 - Complexity - Level 4-2 - 75 Points

Work consists of varying sequences of detailed library technician operations of limited difficulty. Related steps of the work are performed following standard ILL instructions. Decisions to decide what needs to be done requires the employee to use judgment in selecting and applying the most applicable rule, regulation, or instruction. Level 4-2 is met.

### Factor 5 - Scope and Effect - Level 5-2 - 75 Points

The purpose of the work is to provide documents and materials to patrons using various search techniques. The materials provide support for the needs of patrons and assist in the accuracy and completeness of their work. This clearly equates to factor level 5-2.

### Factor 6 - Personal Contacts - Level 6-2 - 25 Points

Contacts are with various professional, technical, and administrative patrons, on a routine basis, in a library setting. This equates to level 6-2.

### Factor 7 - Purpose of Contacts - Level 7-a - 20 Points

The purpose of the contacts is to obtain and provide information to co-workers and Library patrons.

### Factor 8 - Physical Demands - Level 8-2 - 20 Points

The work often requires extensive physical exertion in the need for the incumbent to walk, bend, stoop, and reach for materials, push book carts, and other similar physical activities.

### Factor 9 - Work Environment - Level 9-1 - 5 Points

The work is normally performed in a library/office setting.

**TOTAL POINTS . . . . . . . . . 820** 

### **CONCLUSION:**

Application of the above cited document, coupled with the qualifications requirement for office automation equipment proficiency, results in a classification of Library Technician (Office Automation), GS-1411-04.

### Position "C"

### LIBRARY TECHNICIAN (OFFICE AUTOMATION) GS-1411-XX

### Background

The position is located in the Interlibrary Loan Unit of a large Special Library. Incumbent serves as a library technician performing a variety of duties in support of the Unit.

### **Duties and Responsibilities**

A variety of work is performed which requires knowledge of library organization and interlibrary loan activities in the Library. Time devoted to individual tasks varies with workload requirements.

Specifically, the incumbent performs the following duties.

- 1. Determines availability of requested documents in the Library, and other libraries throughout the world. This involves using the Library's online catalog, and online databases supplied by the Online Computer Library Center, Inc., and others.
- 2. Obtains documents from other libraries by independently generating interlibrary loan requests from appropriate sources using the OCLC-Interlibrary Loan Subsystem, Information on Demand, Chemical Abstracts Document Delivery Service, etc.
- 3. Performs final bibliographic searches for obscure items not found by other staff members. Publications searched include periodicals, congresses, proceedings, and monographic series written in over 80 different foreign languages.
- 4. Processes Online Computer Library Center, Inc., (OCLC) interlibrary loan requests received at the Library from other institutions. This assignment requires using the Library's online catalog to determine availability of materials, checking for copyright compliance, and charging and discharging materials loaned. Updates online records to reflect the current status of loans.
- 5. Performs final bibliographic searches for items not found in the Library by other Unit staff before declaring the items missing and initiating the interlibrary loan process.
- 6. Enters daily statistics for the Interlibrary Loan Unit into dBase files, and generates monthly statistical reports.

- 7. Explains interlibrary loan policies and procedures to agency staff when appropriate.
- 8. Provides patrons with status reports. Consults with patrons to clarify questionable data on request forms.
- 9. Provides daily statistics of various activities.

### Factor 1, Knowledge Required by the Position

- Knowledge of the extensive body of rules and procedures to perform interlibrary loan assignments of considerable variety and complexity due to the nature of the material requested and its possible location, or the incomplete or inaccurate nature of the request.
- Ability to work with a computer terminal to search effectively and efficiently in a variety of databases.
- Skill as a qualified typist and ability to use a variety of word processing equipment and programs.
- Ability to work with a computer terminal to search for materials.
- Detailed knowledge of the library collections and classification systems used by the Library.
- Ability to interact effectively with patrons and with other library staff, using tact and courtesy to accomplish assigned work.
- Knowledge of filing and specialized terminology sufficient to accomplish the work.

### Factor 2, Supervisory Controls

The Head, Interlibrary Loan Unit, makes assignments in terms of objectives, priorities, and deadlines; and assists the incumbent with difficult problems which involve Library policy or which do not have clear precedents. The incumbent plans and carries out the successive steps of the work to final results, handling problems by following established methods and techniques and using standard procedures to produce desired results. Work methods are not reviewed in detail. Completed assignments are subject to review for appropriateness, technical soundness, and conformity with Library policy for interlibrary loan activities.

### Factor 3, Guidelines

Guidelines include written policies and established practices developed for the unit by the agency and/or the Library Branch, the American Library Association, and other association rules and procedures for Interlibrary Loans, U.S. statutes such as those pertaining to the Privacy Act, Copyright Law, and the Freedom of

Information Act. Numerous standard tools and specific guidelines are available for most work. The incumbent uses judgment in locating and selecting the most appropriate guides for specific requests and in recognizing and referring to higher graded workers or the supervisor work requiring significant deviation from standard procedures.

### Factor 4, Complexity

The work consists of a varying sequence of detailed, routine, and non-routine library technician operations of limited scope and difficulty. The incumbent performs a variety of related steps following prescribed or standardized instructions in the Interlibrary Loan Unit. The decisions regarding what needs to be done require the incumbent to use judgment in applying a substantial number of pertinent rules, regulations, and instructions.

### Factor 5, Scope and Effect

The purpose of the work is to provide documents and materials to patrons by using a range of standard library and information services tools and techniques. The provision of appropriate library materials supports the needs of the library patrons and affects the accuracy and completeness of their work.

### Factor 6, Personal Contacts

Personal contacts are with professional and administrative employees, as well as library personnel in other libraries. Contacts are established on a routine basis, but may require the incumbent to determine what is needed and whether the person is entitled to the material requested.

### Factor 7, Purpose of Contacts

The purpose of the contacts is to obtain and provide bibliographic information and materials to Library clientele.

### Factor 8, Physical Demands

Work is sedentary when filing, typing, or processing materials. However, the work requires frequent extensive physical exertion in the need for the incumbent to walk, stretch, bend, stoop, or reach for materials, as well as to push book trucks or similar equipment in locating requested materials.

### Factor 9, Work Environment

The work is normally performed in a library or office setting.

### POSITION EVALUATION REPORT

### STANDARDS APPLIED:

This position description has been evaluated using the OPM classification standard for the Library Technician Series, GS-1411, August 1993.

### POSITION, TITLE, SERIES, AND GRADE:

Library Technician (Office Automation), GS-1411-06

### **BACKGROUND:**

This is a Library Technical position established in the Interlibrary Loan Unit of a large Special Library. The primary purpose of the position is to perform technical, substantive duties in support of the Library's Interlibrary Loan Unit.

### SERIES AND TITLE DETERMINATION:

The work of the position includes clerical, para-professional, technical, and library assistance work in the Interlibrary Loan Unit. The foregoing clearly indicates that the basic appropriate title and series is Library Technician, GS-1411. Since the duties require skill in word processing and use of other office automation equipment, the parenthetical designation "office automation" is added.

### **GRADE DETERMINATION:**

### Factor 1 - Knowledge Required - Level 1-4 - 550 Points

The position under consideration requires knowledge of the extensive body of rules, procedures, and operations to perform ILL assignments of considerable variety and complexity; ability to use a computer terminal on a regular, recurring basis to search for a variety of technical, scientific, and other materials in numerous databases; detailed knowledge of Library special collections and classification systems; and other similar KSAOs. This exceeds factor level 1-3 and clearly meets factor level 1-4.

### Factor 2 - Supervisory Controls - Level 2-3 - 275 Points

The supervisor provides general direction on objectives, deadlines, and priorities, and may assist with matters which do not have clear precedents. The incumbent plans and carries out successive steps of the work. Completed work is evaluated for appropriateness and conformity with overall requirements. This is typical of factor level 2-3.

### Factor 3 - Guidelines - Level 3-2 - 125 Points

Guidelines at this level include numerous standard rules, procedures, and instructions. The incumbent must use judgment to select the most appropriate procedure and correctly apply the most appropriate guideline for the specific task as well as recognize when to refer matters to the supervisor or higher graded worker for resolution of appropriateness of procedural details. This is typical of level 3-2.

### Factor 4 - Complexity - Level 4-2 - 75 Points

Work consists of varying sequences of detailed library technician operations of limited difficulty. Related steps of the work are performed following standard ILL instructions. Decisions to decide what needs to be done requires the employee to use judgment in selecting and applying the most applicable rule, regulation, or instruction. Level 4-2 is met.

### Factor 5 - Scope and Effect - Level 5-2 - 75 Points

The purpose of the work is to provide documents and materials to patrons using various search techniques. The materials provide support for the needs of patrons and assist in the accuracy and completeness of their work. This clearly equates to factor level 5-2.

### Factor 6 - Personal Contacts - Level 6-2 - 25 Points

Contacts are with various professional, technical, and administrative patrons, on a routine basis, in a library setting. This equates to level 6-2.

### Factor 7 - Purpose of Contacts - Level 7-a - 20 Points

The purpose of the contacts is to obtain and provide information to co-workers and Library patrons.

### Factor 8 - Physical Demands - Level 8-2 - 20 Points

The work often requires extensive physical exertion in the need for the incumbent to walk, bend, stoop, and reach for materials, push book carts, and other similar physical activities.

### Factor 9 - Work Environment - Level 9-1 - 5 Points

The work is normally performed in a library/office setting.

**TOTAL POINTS . . . . . . . . . . . 1170** 

### **CONCLUSION:**

Application of the above cited document, coupled with the qualifications requirement for office automation equipment proficiency, results in a classification of Library Technician (Office Automation), GS-1411-06.



### **POSITION DESCRIPTIONS**

### FACTOR EVALUATION SYSTEM (FES)

RAY CROSBY
U.S. OFFICE OF PERSONNEL MANAGEMENT

### THE POSITION versus THE EMPLOYEE

- POSITION CLASSIFICATION ALLOCATES <u>POSITIONS</u>, NOT EMPLOYEES, TO THE APPROPRIATE:
  - PAY PLAN
  - OCCUPATIONAL SERIES
  - TITLE
  - GRADE LEVEL

### **FEDERAL PAY PLAN**

- THE SALARY RATES ATTACHED TO THE GRADES AS PRESCRIBED BY TITLE 5.
- THE PLAN BY WHICH POSITIONS PREVIOUSLY ARRANGED UNDER THE CLASSIFICATION PLAN, ARE EVALUATED IN TERMS OF PAY SCALES.
- THE PROVISIONS OF THE LAW AND REGULATIONS CONTROLLING SALARY USE.

### **POSITION CLASSIFICATION**

THE GROUPING OF POSITIONS IN CLASSES IN CONFORMANCE WITH STANDARDS ISSUED BY THE OFFICE OF PERSONNEL MANAGEMENT.

### FEDERAL POSITION CLASSIFICATION PLAN

- A COMPREHENSIVE, ORDERLY SYSTEM FOR PLACING POSITIONS INTO THEIR PROPER:
  - · SCHEDULE,
  - OCCUPATIONAL GROUP,
  - · SERIES.
  - · AND GRADE.
- TAKES INTO ACCOUNT DIFFERENCES IN:
  - . KIND OF WORK OR DUTIES,
  - LEVEL OF DIFFICULTY AND RESPONSIBILITY,
  - AND QUALIFICATION REQUIREMENTS.

### LEGAL BASIS FOR POSITION CLASSIFICATION IN THE FEDERAL GOVERNMENT

- CLASSIFICATION ACT OF 1923
- CLASSIFICATION ACT OF 1949, AS AMENDED -CODIFIED INTO CHAPTER 51 OF TITLE 5.

### **CLASSIFICATION ACT OF 1923**

### **CONTAINED THREE BASIC PRINCIPLES:**

- CLASSIFICATION SHALL BE BASED ON REQUIRED:
- DUTIES
- RESPONSIBILITIES
- QUALIFICATIONS
- EQUAL PAY FOR SUBSTANTIALLY EQUAL WORK
- DIFFERENCES IN PAY SHALL BE IN PROPORTION TO DIFFERENCES IN:
  - DIFFICULTY
  - RESPONSIBILITY
  - QUALIFICATIONS REQUIRED TO PERFORM WORK

### PREPARING POSITION DESCRIPTIONS IN THE FACTOR EVALUATION SYSTEM (FES) FORMAT MAJOR DUTIES

**FACTORS 1 & 2 OF 9 FACTORS** 

- A. FACTOR 1 KNOWLEDGES & SKILLS REQUIRED BY THE POSITION
  - KIND OR NATURE OF KNOWLEDGES & SKILLS NEEDED;
  - HOW THESE KNOWLEDGES & SKILLS ARE USED IN DOING THE WORK:
  - DESCRIPTION OF THE WORK SITUATION (FOR SECRETARIAL POSITIONS ONLY).
- B. FACTOR 2 SUPERVISORY CONTROLS
  - WHO PROVIDES THE SUPERVISION;
  - HOW THE WORK IS ASSIGNED:
  - THE EMPLOYEE'S RESPONSIBILITY FOR CARRYING OUT THE WORK;
  - HOW THE WORK IS REVIEWED.

### PREPARING POSITION DESCRIPTIONS IN FACTOR EVALUATION SYSTEM (FES) FORMAT

### MAJOR DUTIES FACTORS 3 & 4 OF 9 FACTORS

- C. FACTOR 3 GUIDELINES
  - NATURE OF GUIDELINES FOR PERFORMING THE WORK:
  - JUDGMENT NEEDED TO APPLY GUIDELINES, OR NEEDED TO DEVELOP NEW GUIDES.
- D. FACTOR 4 COMPLEXITY
  - NATURE OF THE ASSIGNMENT:
  - . DIFFICULTY IN IDENTIFYING WHAT NEEDS TO BE DONE:
  - . DIFFICULTY & ORIGINALITY INVOLVED IN PERFORMING THE WORK.

### PREPARING POSITION DESCRIPTIONS IN FACTOR EVALUATION SYSTEM (FES) FORMAT

### **MAJOR DUTIES**

(FACTORS 5 & 6 OF 9 FACTORS)

- E. FACTOR 5 SCOPE AND EFFECT
  - PURPOSE OF THE WORK:
  - IMPACT OF THE WORK PRODUCT OR IMPACT OF THE SERVICE
- F. FACTOR 6 PERSONAL CONTACTS
  - PEOPLE AND CONDITIONS UNDER WHICH CONTACTS ARE MADE (THESE DO NOT INCLUDE CONTACTS WITH THE SUPERVISOR).

### PREPARING POSITION DESCRIPTIONS IN FACTOR EVALUATION SYSTEM (FES) FORMAT

### **MAJOR DUTIES**

(FACTORS 7 - 9 OF 9 FACTORS)

- G. FACTOR 7 PURPOSE OF CONTACTS
  - REASONS FOR CONTACTS IN FACTOR 6:
  - SKILLS NEEDED TO ACCOMPLISH WORK THROUGH PERSON-TO-PERSON ACTIVITIES.
- H. FACTOR 8 PHYSICAL DEMANDS
  - NATURE, FREQUENCY, AND INTENSITY OF PHYSICAL ACTIVITY, AND ANY SPECIAL PHYSICAL ABILITIES NEEDED.
- I. FACTOR 9 WORK ENVIRONMENT
  - RISKS AND DISCOMFORTS IMPOSED BY PHYSICAL SURROUNDINGS AND THE SAFETY PRECAUTIONS NECESSARY TO AVOID ACCIDENTS OR DISCOMFORT.

### **CLASSIFICATION ACT OF 1949**

- ESTABLISHED "GENERAL SCHEDULE" (GS)
- ESTABLISHED GS-16, GS-17, GS-18
- DELEGATED AUTHORITY TO CLASSIFY POSITIONS TO AGENCIES (EXCEPT GS-16, GS-17, GS-18)
- PRESCRIBED BROAD STANDARDS FOR MEASURING JOBS
- OPM TO POST-AUDIT AGENCY CLASSIFICATION ACTIONS DIRECT CORRECTIVE ACTION
- OPM TO DECIDE EMPLOYEE APPEALS
- REQUIRED OPM TO PUBLISH STANDARDS

### **POSITION**

- A GROUP OF CURRENT DUTIES AND RESPONSIBILITIES ASSIGNED OR DELEGATED BY A MANAGER OR BY A SUPERVISOR
- REQUIRES FULL OR PART-TIME EMPLOYMENT OF ONE PERSON
- CLASSIFIED ON THE BASIS OF ITS DUTIES AND RESPONSIBILITIES WHETHER OCCUPIED OR VACANT

### GRADE

- A ZONE OF DIFFICULTY AND RESPONSIBILITY OF WORK UNDER THE CLASSIFICATION ACT;
- INCLUDES POSITIONS ACROSS ALL CLASSES WHICH ARE:
  - DIFFERENT IN KIND OF WORK;
  - BUT SUFFICIENTLY ALIKE IN LEVEL OF WORK
     TO WARRANT INCLUSION IN SAME CLASSIFICATION ACT PAY-RATE RANGE.
- FOR EXAMPLE:
  - GRADE 1 15

### **SERIES**

- A SUBDIVISION OF AN OCCUPATIONAL GROUP;
- CONSISTS OF A NUMBER OF POSITIONS WHICH ARE:
  - SIMILAR, AS TO SPECIALIZED TYPE OF WORK;
  - BUT DIFFERENT AS TO RESPONSIBILITY,
     DIFFICULTY OF WORK, GRADE AND SALARY-RANGE.
- FOR EXAMPLE:
  - PERSONNEL STAFFING SPECIALIST IS IN SERIES 212 AND THE GRADE RANGE IS GS-05 AND ABOVE.

### **OCCUPATIONAL GROUP**

- A MAJOR SUBDIVISION OF A SCHEDULE
- EACH GROUP CONSISTS OF SEVERAL SERIES
- ALL SERIES IN A GROUP ARE RELATED BY OCCUPATION, PROFESSION, OR ACTIVITY
- EXAMPLES:
  - ALL PERSONNEL-RELATED JOBS FALL IN THE OCCUPATIONAL GROUP 200
  - ALL ENGINEERING JOBS
    FALL IN THE OCCUPATIONAL GROUP 800

### **CLASSIFICATION STANDARDS**

- CONTROLLING GUIDES: USED BY CLASSIFICATION AUTHORITIES TO PLACE POSITIONS IN CLASSES
- ISSUED BY OPM UNDER TITLE IV OF THE CLASSIFICATION ACT OF 1949, AS AMENDED
- ALL GENERAL SCHEDULE (GS) & GENERAL MANAGER (GM)
   POSITIONS MUST BE CLASSIFIED IN CONFORMANCE
   WITH OPM CLASSIFICATION STANDARDS
- FEDERAL WAGE SYSTEM (FWS) POSITIONS MUST BE CLASSIFIED IN ACCORDANCE WITH OPM JOB GRADING STANDARDS

### POSITION DESCRIPTION

- AN OFFICIAL, WRITTEN STATEMENT OF THE DUTIES, RESPONSIBILITIES, AND ORGANIZATIONAL RELATIONSHIPS OF A POSITION
- DOES NOT PRESCRIBE DUTIES MERELY REPORTS THEM
- THE POSITION IS CLASSIFIED NOT THE POSITION DESCRIPTION

### **MAJOR DUTY**

- COMPRISES THE REASON FOR THE POSITION'S ESTABLISHMENT OR EXISTENCE, AND EITHER:
  - A. OCCUPIES A SIGNIFICANT AMOUNT OF THE INCUMBENT'S TIME (AT LEAST 10% OR MORE), OR
  - B. GOVERNS THE QUALIFICATION REQUIREMENTS OF THE POSITION.

### **MINOR DUTY**

- AN INCIDENTAL OR MISCELLANEOUS DUTY OR RESPONSIBILITY
- DOES NOT AFFECT THE QUALIFICATIONS REQUIRED FOR EMPLOYMENT
- DOES NOT OCCUPY A SIGNIFICANT AMOUNT OF THE INCUMBENT'S TIME

### PATTERNS OF CONCEPTS A LISTING OF THE FES PATTERNS (FACTOR EVALUATION SYSTEM)

- FACTOR 1 KNOWLEDGE REQUIRED BY THE POSITION
- FACTOR 2 SUPERVISORY CONTROLS
- FACTOR 3 GUIDELINES
- FACTOR 4 COMPLEXITY
- FACTOR 5 SCOPE AND EFFECT
- FACTOR 6 PERSONAL CONTACTS
- FACTOR 7 PURPOSE OF CONTACTS
- FACTOR 8 PHYSICAL DEMANDS
- FACTOR 9 WORK ENVIRONMENT

### PATTERNS OF CONCEPTS A SUMMARY

**FACTORS 1 AND 2** 

- FACTOR 1 KNOWLEDGE REQUIRED BY THE POSITION
  - KIND OR NATURE OF KNOWLEDGES AND SKILLS NEEDED;
  - HOW THESE KNOWLEDGES AND SKILLS ARE USED IN DOING THE WORK.
- FACTOR 2 SUPERVISORY CONTROLS
  - . HOW THE WORK IS ASSIGNED;
  - THE EMPLOYEE'S RESPONSIBILITY FOR CARRYING OUT THE WORK;
  - HOW THE WORK IS REVIEWED.

### PATTERNS OF CONCEPTS A SUMMARY

**FACTORS 3 AND 4** 

- FACTOR 3 GUIDELINES
  - THE NATURE OF GUIDELINES FOR PERFORMING THE WORK;
  - JUDGEMENT NEEDED TO APPLY THE GUIDELINES OR DEVELOP NEW GUIDES.
- FACTOR 4 COMPLEXITY
  - NATURE OF THE ASSIGNMENT:
  - DIFFICULTY IN IDENTIFYING WHAT NEEDS TO BE DONE;
  - DIFFICULTY AND ORIGINALITY INVOLVED IN PERFORMING THE WORK.

### PATTERNS OF CONCEPTS A SUMMARY

FACTORS 5, 6, AND 7

- FACTOR 5 SCOPE AND EFFECT
  - PURPOSE OF THE WORK;
    - IMPACT OF THE WORK-PRODUCT OR SERVICE.
- FACTOR 6 PERSONAL CONTACTS
  - PEOPLE AND CONDITIONS UNDER WHICH CONTACTS ARE MADE (EXCEPT WITH THE SUPERVISOR).
- FACTOR 7 PURPOSE OF CONTACTS
  - REASONS FOR CONTACTS IN FACTOR 6:
  - SKILL NEEDED TO ACCOMPLISH WORK THROUGH PERSON-TO-PERSON ACTIVITIES.

### PATTERNS OF CONCEPTS A SUMMARY

FACTORS 8 AND 9

- FACTOR 8 PHYSICAL DEMANDS
  - THE NATURE, FREQUENCY, AND INTENSITY OF PHYSICAL ACTIVITY.
- FACTOR 9 WORK ENVIRONMENT
  - THE RISKS AND DISCOMFORTS IMPOSED BY PHYSICAL SURROUNDINGS AND THE SAFETY PRECAUTIONS NECESSARY TO AVOID ACCIDENTS OR DISCOMFORT

### **FACTORS USED IN EVALUATING POSITIONS**

FEDERAL WAGE SYSTEM	CONVENTIONAL FEDERAL EIGHT-FACTOR SYSTEM	FACTOR EVALUATION SYSTEM (FES)
1. SKILL & KNOWLEDGE	1. NATURE AND VARIETY OF WORK	1. KNOWLEDGE REQUIRED BY POSITION
2. RESPONSIBILITY (INCLUDES SUPERVISORY CONTROLS, GUIDELINES, SCOPE AND EFFECT)	2. NATURE OF SUPERVISORY CONTROL EXERCISED OVER THE POSITION	2. SUPERVISORY CONTROLS
3. PHYSICAL EFFORT	3. NATURE & AVAILABILITY OF GUIDELINES CONTROLLING DECISION AND ACTIONS	3. GUIDELINES
4. WORKING CONDITIONS	4. ORIGINALITY OF THINKING REQUIRED	4. COMPLEXITY
	5. PURPOSE AND NATURE OF PERSON-TO-PERSON WORK RELATIONSHIPS	5. SCOPE AND EFFECT
	6. NATURE AND SCOPE OF RECOMMENDATIONS, DECISION, COMMITMENTS	6. PERSONAL CONTACTS
NOTE: FACTOR 7 IS EVALUATED BY REFERENCE TO THE SUPERVISORY GRADE EVALUATION GUIDE	7. NATURE AND EXTENT OF SUPERVISORY CONTROL OVER THE WORK OF OTHERS	7. PURPOSE OF CONTACTS
	8. MINIMUM QUALIFICATION REQUIRED	8. PHYSICAL DEMANDS 9. WORK ENVIRONMENT

### TOOLS OF THE SYSTEM - I THE FACTORS OPM FACTOR EVALUATION SYSTEM (FES)

- 1. KNOWLEDGE REQUIRED BY THE POSITION
- 2. SUPERVISORY CONTROLS
- 3. GUIDELINES
- 4. COMPLEXITY
- 5. SCOPE AND EFFECT
- 6. PERSONAL CONTACTS
- 7. PURPOSE OF CONTACTS
- 8. PHYSICAL DEMANDS
- 9. WORK ENVIRONMENT

### TOOLS OF THE SYSTEM - II THE STANDARDS - CHART 1 OF 5

### THE PRIMARY STANDARD

- IS THE STANDARD FOR STANDARDS
- DESCRIBES LEVELS OF THE FACTORS IN GENERAL TERMS
- ASSIGNS POINT VALUES TO EACH LEVEL
- CONTAINS THE POINT CONVERSION TABLE

### TOOLS OF THE SYSTEM - III THE STANDARDS - CHART 2 OF 5 CLASSIFICATION STANDARDS (1977 CONCEPT )

Along with traditional occupational information, they contain two parts for grading positions:

- a. the factor-level descriptions,
   and -
- b. the benchmarks.

### TOOLS OF THE SYSTEMS - IV THE STANDARDS - CHART 3 OF 5 CLASSIFICATIONS STANDARDS (1977 CONCEPT)

- a. THE FACTOR-LEVEL DESCRIPTIONS:
  - ADOPT THE CONCEPTS OF THE PRIMARY STANDARD
  - DESCRIBE LEVELS OF THE FACTORS IN TERMS OF THE SERIES
  - ASSIGN THE POINT VALUES OF THE PRIMARY STANDARD TO THE LEVELS

### TOOLS OF THE SYSTEM - V THE STANDARDS - CHART 4 OF 5 CLASSIFICATION STANDARDS (1977 CONCEPT)

- b. THE BENCHMARKS:
  - DESCRIBE ACTUAL WORK SITUATIONS:
  - ARE POINT RATED AND GRADED BY REFERENCE TO THE FACTOR-LEVEL DESCRIPTIONS FOR THE OCCUPATIONS, AND THE CONVERSION TABLE:
  - DESCRIBE THE LEVELS OF THE FACTORS IN TERMS OF THE POSITION;
  - ARE IN THE SAME FORMAT AS POSITION DESCRIPTIONS.

### TOOLS OF THE SYSTEM - VI THE STANDARDS - CHART 5 OF 5 CLASSIFICATION GUIDES

(MULTI-OCCUPATIONAL OR FUNCTIONAL GRADE-LEVEL CRITERIA)

- IS A "STANDARD" FOR SEVERAL SIMILAR OCCUPATIONS OR FOR AN OCCUPATIONAL FUNCTION;
- DESCRIBES LEVELS IN MORE GENERAL TERMS THAN AN OCCUPATIONAL STANDARD, BUT WITH MORE SPECIFICS THAN THE PRIMARY STANDARD;
- ASSIGNS POINT VALUES TO EACH LEVEL;
- CONTAINS THE POINT CONVERSION TABLE;
- CONTAINS INCLUSIONS AND EXCLUSIONS OF COVERAGE.

### FACTOR EVALUATION SYSTEM GRADE CONVERSION TABLE

(ADAPTED FROM OPM TS - 27 MAY 1977)

FACTOR LEVELS	TOTAL # OF POINTS	PERCENTAGE
FACTOR 1 - KNOWLEDGE REQUIF BY THE POSITION	RED 50 TO 1850	40%
FACTOR 2 - SUPERVISORY CONTI FACTOR 3 - GUIDELINES	ROLS 25 TO 650 26 TO 650	15%
FACTOR 4 - COMPLEXITY	25 TO 450	18%
FACTOR 6 - SCOPE AND EFFECT FACTOR 6 - PERSONAL CONTACT	26 TO 480	10% 3%
FACTOR 7 - PURPOSE OF CONTAI FACTOR 8 - PHYSICAL DEMANDS		8% 1%
FACTOR 9 - WORK ENVIRONMENT		1%

### FACTOR EVALUATION SYSTEM GRADE CONVERSION TABLE

(ADAPTED FROM OPM TS - 27 MAY 1977)

SS GRADE	POINT RANGE	
01	190 - 250	
02	255 - 450	
03	455 - 650	
04	655 - 850	
05	855 - 1100	
06	1100- 1350	
07	1355- 1600	
80	1605- 1850	
09	1855- 2100	
10	2105- 2350	
11	2355- 2750	
12	2755- 3150	
13	3155- 3600	
14	3605- 4050	
15	4055- UP	

### TYPICAL FACTOR LEVEL RELATIONSHIPS NON-SUPERVISORY POSITIONS - GRADES 4 TO 8

(DERIVED FROM OPM TS - 98 AUGUST 1990)

THE FOLLOWING TABLE ILLUSTRATES HOW FES FACTOR LEVELS COMBINE IN TYPICAL POSITIONS. HOWEVER, OTHER COMBINATIONS OF FACTORS MAY BE APPROPRIATE FOR PARTICULAR POSITIONS. **FACTOR LEVELS GS-04 GS-05 GS-06 GS-07** GS-08 1. KNOWLEDGE REQUIRED 1-3 1-3 or 1-5 1-5 or 1-6 2. SUPERVISORY CONTROLS 789 2-2 or 23 23 28 2-3 3. GUIDELINES 3-2 3-2 3-2 3-2 3-2 or 3-3 4. COMPLEXITY 4-2 4-2 4-2 43 4-3 5. SCOPE AND EFFECT 5-2 5-2 5-2 5-3 5-3 6. PERSONAL CONTACTS 6-1 pr 6-2 8-2 6-3 6-3 **6-2** 7. PURPOSE OF CONTACTS 7-2 7-2 7-a or 7-b 7-b 7-b 8. PHYSICAL DEMANDS 8-2 8-2 8-2 8-2 8-2 9. WORK ENVIRONMENT 9-1 9-1 9-1 9-1 9-1

### TYPICAL FACTOR LEVEL RELATIONSHIPS **NON-SUPERVISORY POSITIONS - GRADES 9 TO 14**

(ADAPTED FROM OPM TS - 98 AUGUST 1990) THE FOLLOWING TABLE ILLUSTRATES HOW FES FACTOR LEVELS COMBINE IN TYPICAL POSITIONS. HOWEVER, OTHER COMBINATIONS OF FACTORS MAY BE APPROPRIATE FOR PARTICULAR POSITIONS. **FACTOR LEVELS** GS-09 **GS-11 GS-12 GS-13 GS-14** 1. KNOWLEDGE REQUIRED 1-8 1-8 2. SUPERVISORY CONTROLS 283 2-3 or ., 2-4 or 2-5 24 2-5 3. GUIDELINES 3-3 3-3 3-4 3-4 or 3-5 4. COMPLEXITY 4-3 4-4 4-4 or 4-5 4-6 4-5 5. SCOPE AND EFFECT 5-3 5-4 5-4 5-4 or 5-5 5-5 6. PERSONAL CONTACTS 6-2 or 6-2 or 6-3 6-3 6-3 6-3 6-3 7. PURPOSE OF CONTACTS 7-b or 7-b or 7-c 7-c 7-c or 7-c 7-c 7-d 8. PHYSICAL DEMANDS 8-1 8-1 8-1 8-1 8-1 9. WORK ENVIRONMENT 9-1 9-1 9-1 9-1 9-1

### WINNING THROUGH TECHNOLOGY — NEW MEXICO STYLE

Dr. Arthur H. Guenther New Mexico Governor's Science Advisor Sandia National Laboratory

**VUGRAPHS ONLY** 

### THROUGH TECHNOLOGY WINNING

NEW MEXIC 

STYLE



# TECHNOLOGY-BASED ECONOMIC IMPACT/RESOURCES

### FEDERAL TECHNOLOGY SECTOR

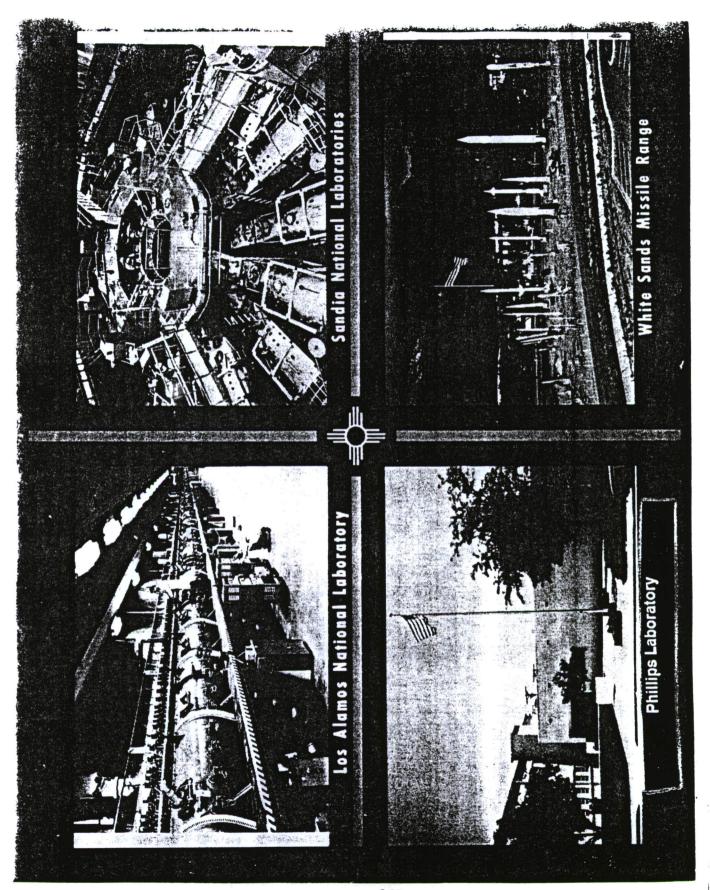
- New Mexico ranks 4th nationally in federal R&D performance.
- \$8.4 billion in generated economic activity.
- 83,000 generated jobs.
- \$1.2 billion in research, development, testing and evaluation equipment.

## UNIVERSITY TECHNOLOGY SECTOR

- New Mexico ranks 4th nationally in R&D performance.
- \$400 million in generated economic activity.
- 12,000 generated jobs.
- \$100 million in facilities and equipment.

### PRIVATE TECHNOLOGY SECTOR

- New Mexico ranks 21st nationally in R&D performance.
- \$1.7 billion in generated economic activity.
- 25,000 generated jobs.



# MEXICO'S RESEARCH UNIVERSITIE



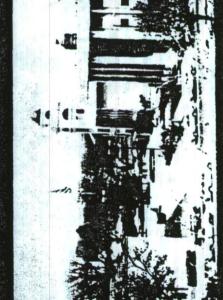






University of New Mexico





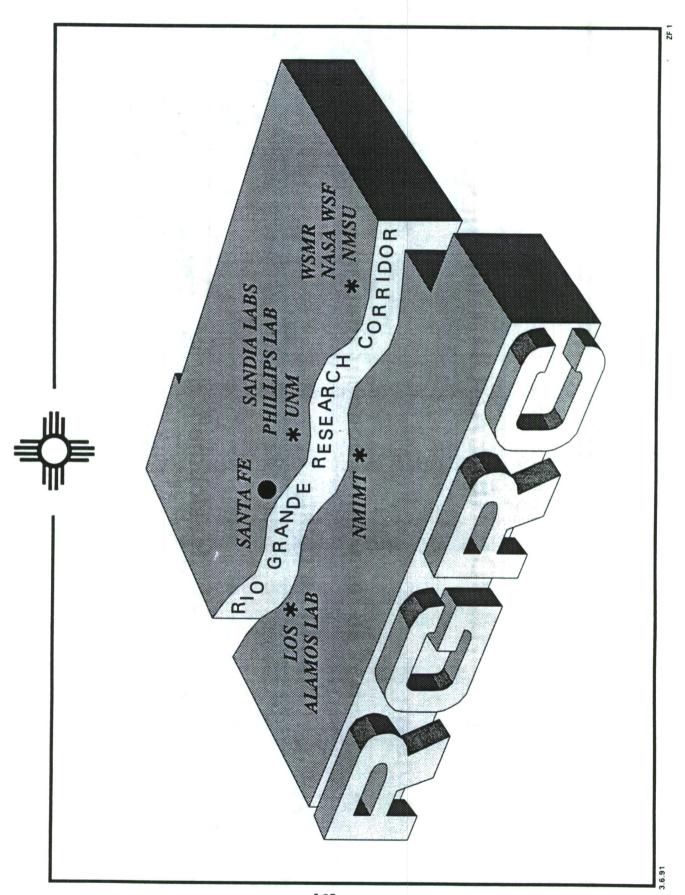
New Mexico State University



## **NEW MEXICO: TOP-RANKING**

New Mexico ranks 1st among the 50 states in the ratio of R&D performance to gross state product.

-- National Science Foundation, 1989





# RIO GRANDE RESEARCH CORRIDOR

### Vision

Not an idea, but a concept that has

become a reality

### Goal

environment conducive to high-technology Economic development by creating an

activities



## RIO GRANDE RESEARCH CORRIDOR

Initial Stages

Use of New Mexico universities as technology transfer agents Leveraging extensive federal R&D investment in New Mexico Investments in New Mexico

Network Building (Partnerships, Alliances, Consortia, Teaming)

Communication

Cooperation

Coordination



## **CENTERS OF TECHNICAL EXCELLENCE**

### Criteria:

Areas well defined, related to the interests of the federal R&D presence in **New Mexico** 

World-class directors

A base exists at the host institution

Areas capable of enhancing existing high-technology industry and attracting Institution must commit to maintaining the level of excellence

outside high-technology investment

Potential for self-sufficiency

### State Funding:

\$30 million over six years (1983-1989)

### Centers

Center for High Technology Materials

Center for Non-Invasive Diagnosis

Center for Explosives Technology Research

Computing Research Laboratory

Plant Genetic Engineering Laboratory



## **NEW MEXICO FEDERAL/NATIONAL LABORATORY** STRATEGIC ALLIANCE

agreeing to collaborate on future technical efforts that will benefit New Mexico's national and federal laboratories -- Phillips, Los Alamos, and Sandia -- have established a strategic alliance, the state and the nation.

### Benefits include:

- More effective use of government, including financial, resources.
- More rapid maturing of technologies.
- Broader application of these technologies by government and industry.
- Better exchange of information and expertise developed within each of the labs.



## Mission Statement

The mission of the Strategic Alliance between missions and provide collective leadership in Laboratory is to enhance our capabilities to Laboratories, and the Los Alamos National accomplish our respective national security Phillips Laboratory, Sandia National technology innovation. The Alliance will form a focus through which the members can bring their talents to bear, in a timely and interreliant manner on technical rapid maturity and broad application of science and technology in both the government and private sectors. effective and efficient use of Alliance resources by facilitating the issues of national importance. The Nation will benefit through

## LIBRARY SERVICES ALLIANCE OF NEW MEXICO

The goal of the Alliance is to meet the needs of researchers by:

- Sharing electronic resources
- Working together to enhance the combined collections of the member libraries
- Providing fast interlibrary document delivery
- Sharing access to the expert knowledge of library staff

### LIBRARY SERVICES ALLIANCE Founded in January 1992 OF REW MEXICO

Los Alamos National Laboratory Phillips Laboratory Sandia National Laboratories Centennial Library (Science, Engineering) of the University of New Mexico

New Mexico State University (Las Cruces)

New Mexico Institute of Mining and Technology (Socorro)

Rick Luce Barbara Newton Sally Landenberger Harry Llull

Jeanne Howard

**Betty Reynolds** 

## LIBRARY SERVICES ALLIANCE OF REW MEXICO

Accomplishments

- Shared information on periodicals cancellations
- Working to ensure that each library catalog can be accessed from any library of the **Alliance**
- Began working to improve document delivery between Alliance libraries

## NEW MEXICO UNION LIST OF SERIALS

Produced and distributed at no cost by the New Mexico State Library during 1992

research and public libraries of New Mexico Contains serial holdings of the major

Information is distributed on a CD-ROM

# SOME PLEASURABLE LIBRARY EXPERIENCES

- Conferences, Leadership and Documentation
- History "Laser in America"
- IEEE, OSA, LIA, AIP, Smithsonian, MIT - Professional community
  - Classified segment
- Archives for transcription, artifacts - Recorded oral interviews
- DOD, DOE large contributors \$
- Interview Preparation
- Background writings
- Search for Reviews
- Lord Rayleighs Papers
- Statistics Credibility Enhancement
- International Cooperation
- Donation Repository



A Library is not so much a place of informational service but more a very necessary professional collaborator in Scientific Research and other worthwhile endeavors.

especially professional society publishers who are also under downsizing, cost reductions and technological change, one similar pressures. Such a meeting with the Association of Professional Society Presidents or their Technical Councils To further enhance this dual role during these periods of might suggest the community meet with publishers, which input their Board of Directors is suggested.



## STATE OF NEW MEXICO/U.S. AIR FORCE **WORKING PARTNERSHIP**

For over 12 years, the Air Force has been an increasingly proactive force in development of New Mexico's research and development infrastructure. The Air Force:

- Provided guidance leading to a \$24 million science and engineering fund for New Mexico's universities.
- internationally recognized university-based Centers of Technical Excellence. Provided guidance leading to the development and funding of the State's
- Provided over \$14 million annually to the universities in research and development funding.
- in secondary education through the Air Force Introduction to Engineering, ■ Developed innovative approaches to enhance science and mathematics mentorship, and Fundamental Skills Tutor programs.
- Actively participated in a wide range of technology alliances.



20.00

## STATE OF NEW MEXICO/U.S. AIR FORCE **WORKING PARTNERSHIP**

The State, in response to the Air Force's contribution to the development of New Mexico's research and development infrastructure, has:

- Laboratory's (now Phillips Laboratory) initial technology transfer activities. ■ Detailed an employee, under an IPA, to administer the Air Force Weapons
- Air Force (initiated by the Air Force) to enhance and expand the transfer of Entered into a 3-year, \$1.2 million technology transfer contract with the Phillips Laboratory technology to the public and private sectors.
- level, to enhance technology transfer, technology commercialization, and Worked collaboratively with policy makers, both at the state and federal appropriate defense conversion legislation.
- Elimination of New Mexico Gross Receipts Tax for Aerospace R&D.
- New Mexico Defense Conversion Act:
- \* Appropriation of \$1 million.
- st Creation of single focal point for all state activities in defense conversion -- the NM Economic Development Department.



# PHILLIPS LABORATORY TECHNOLOGY ALLIANCES IN NEW MEXICO

cooperative arrangements for technology transfer within the state of New Mexico: The Air Force Phillips Laboratory is or has been involved in a number of

- Strategic Alliance
- Alliance for Photonic Technology (APT)
- Library Strategic Alliance
- Governor's Technical Excellence Committee (G-TEC)
- Advanced Materials and Processes for Economic Competitiveness (AMPEC) Alliance
- Intelligent Tutor CRDA
- State Technology Assistance Resource System (STARS)
- Research Center for Energetic Materials at NM Tech
- Space New Mexico
- Education Alliance

AHG 51



## GOVERNOR'S COMMITTEE ON TECHNICAL EXCELLENCE (G-TEC)

and business communities. It represents the state's commitment to fully utilize G-TEC is comprised of leading executives in the state's scientific, university, reputation for technical excellence by means of cooperation, at the highest its vast technological resources and enhance its national and international evels, between government, private industry, and education sectors.

### G-TEC members are:

- Governor's Science Advisor
- Secretary, New Mexico Economic Development Department
- I Director, Los Alamos National Laboratory
- President, Sandia National Laboratories
- I Commander, U.S. Army White Sands Missile Range
- I Commander, U.S. Air Force Phillips Laboratory
- Manager, NASA White Sands Test Facility
- Manager, U.S. Department of Energy -- Albuquerque Field Office
- President, University of New Mexico
- President, New Mexico Institute of Mining and Technology
- President, New Mexico State University
- Four Private Industry Representatives

### High-Tech Jobs for New Mexico: A Call for State Action

Governor's Technical Excellence Committee 1992 Report to the Governor





## GTEC 1992 Report to the Governor

# HIGH-TECH JOBS FOR NEW MEXICO: A CALL FOR STATE ACTION

### Principal Opportunities

- Manufacturing
- Space New Mexico
- Environmental and waste management technologies

### Others Identified

- Materials
- Health and biotechnologies
- Computer technologies
- Energy
- Transportation



## GTEC 1992 Report to the Governor

## SPACE NEW MEXICO

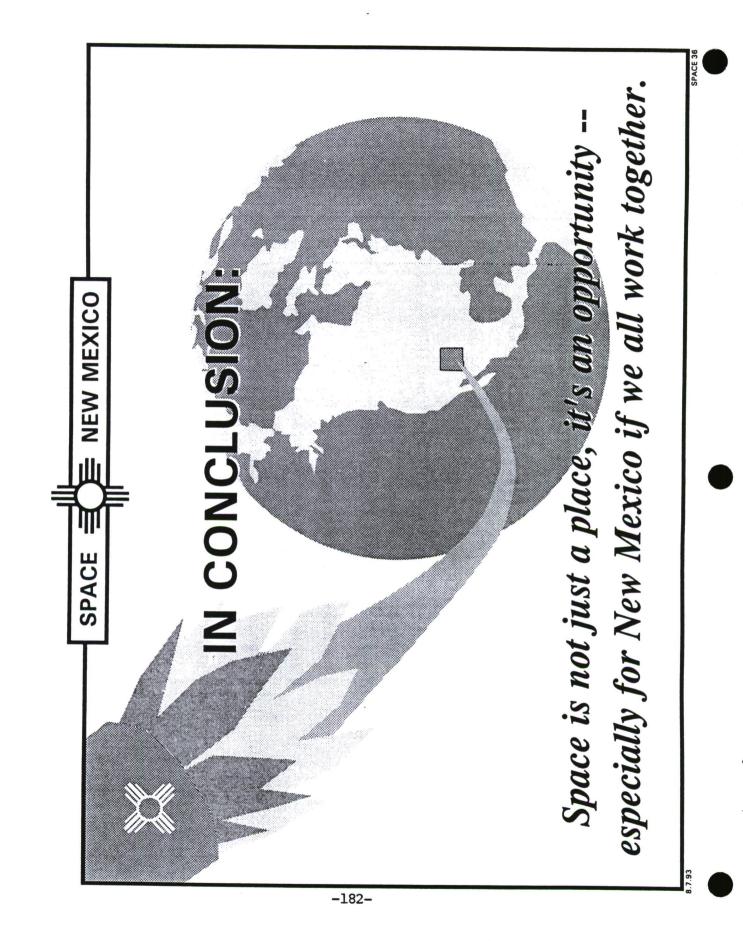
- + WSMR -- Launch and recovery
- AF Phillips Lab -- Principal DoD Space and Missile technology
- LANL
- > DOE -- Space technologies
  - + SNL
- PACA -- Industrial sector access
- Universities -- Space-related activities, tech transfer activities

# TOTAL Large concentration of space-related R&D activities

(low cost, frequent access to space) (weather, climate -- exploration) + Anticipated space growth: Commercial, military, scientific

(especially small satellites, LEO)

— Opportunity for New Mexico



# STAGES TO SUCCESSFUL CONSORTIA

Phase 1: Amass and Assess

- Assets, resources
- Market opportunities
- Strengths, weaknesses

Phase 2: Plan - Together

Organize collegially, share

Leverage one another

- Coordinate/communicate/cooperate/collaborate
- Involve federal and state government, education, business

Phase 3: True Partnership

- Obtain buy-in, trust, commitment
- Focus and lead, hire the best people
- Market



"New Mexico is a national model of the first order in technology-based economic development."

----

private and public sectors to compete in today's global engaged its federal laboratories as partners with its "I know of no other state that has so successfully technological economy."

Belden Hull Daniels, President
 Counsel for Community Development, Inc.
 Boston, Massachusetts

State

Education

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### ACCESS RUSSIA

Marjorie M.K. Hlava President, Access Innovations, Inc.

**VUGRAPHS ONLY** 

### ACCESS RUSSIA

### A JOINT PROJECT

### ACCESS INNOVATIONS, INC. Albuquerque, NM

### and

### THE INTERNATIONAL CENTER FOR SCIENTIFIC AND TECHNICAL INFORMATION

### ACCESS RUSSIA

- ✓ Established in 1992
- ✓ Joint Project with ICSTI
- ✓ Moscow-based operations and facility
- ✓ Key Staff is Russian
- Russian-speaking Staff in Albuquerque

### VINITI

### ALL RUSSIAN INSTITUTE FOR SCIENTIFIC AND TECHNICAL INFORMATION

- ✓ Established in 1952 as All Union Institute
- Interdisciplinary (polythematic) database
- √ 11 million records in electronic format
- ✓ Growing at the rate of 1.3 million records per year
- ✓ Approximately 30% of the data is not available in the West
- ✓ Approximately 100 countries covered
- 23 languages represented
- Database includes report literature, monographs, patents, theses, dissertations, conference proceedings
- ✓ Publishes glossaries, thesauri, bibliographies, compilations of recent work in various subject areas

### ICSTI

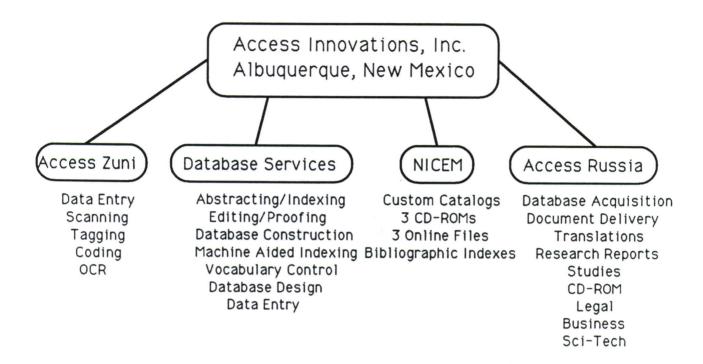
### INTERNATIONAL CENTER FOR SCIENTIFIC AND TECHNICAL INFORMATION

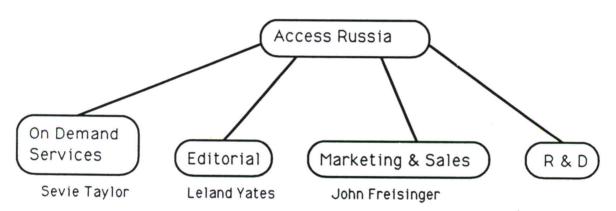
- ✓ Established in 1969
- International/intergovernmental organization originally made up of Eastern bloc countries
- Joint project with Access Innovations, Inc.
- 12 databases (in Russian) available online

SCI-TECH Experimental Research Industrial Catalogs
Trade and Economic Information in Chemistry Coal Industries
Food Industries
Light Metallurgy
Chemical Engineering
Environmental Safety
Superconductivity
Thermodynamics
International Standards

Publishes analytical reports and such directories as:

Who's Who in Russia
RELCOM Directory of Electronic Mail Addresses





Database AcquisitionsDatabase Construction
Translations Legal
Document Delivery Business
Reports Sci-Tech
Quality Control
Studies

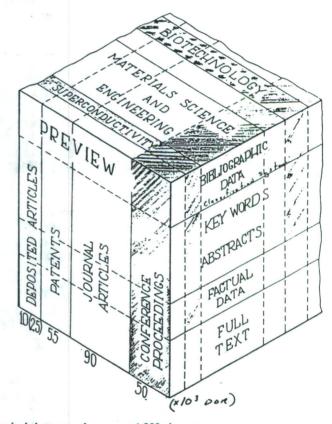
Software Development Software Support Sales Distribution Exhibitions Mailouts PR Machine Translation Multi-lingual Interfaces Cyrillic Drivers

### VINITI

### POLYTHEMATIC DATABASE COVERAGE

### STRUCTURE OF THE VINITI POLYTHEMATIC DATABASE

Ordele et Ce etle e	Danasatana
Subject Section	Percentage
Mathematics	3.6
Mechanics	2.7
Physics	7.3
Chemistry & Corrosion	14.9
Biochemical Biology & Biotechnology	4.5
Biology	18.6
Astronomy	2.1
Geography	2.0
Geophysics	1.4
Environmental Protection	2.3
Mining	1.7
Metallurgy	3.4
Mechanical Engineering	9.5
Transportation	3.0
Power Engineering	2.7
Automation	1.5
Industrial Economics	1.8
Informatics, publishing, printing	1.3



A typical data record averages 1,200 characters

Title/transliterated title Author/author affilliation Journal name Volume, issue, date 700 character abstract 200 character keyword indexing

### EXTERNAL ISSUES IN ACQUIRING FOREIGN LITERATURE / DATA

### CHANGES IN SCIENCE

Internationalization
Big science cooperation
Growth in volume of data
Differences in manners of measurement

### POLITICAL

Free exchange of information
Changing face of the globe
Increasing importance of science in business
(technology transfer)
Shift from military to industrial competitiveness
Governments competing with companies for data

### TECHNOLOGICAL

Paradigm shift in information access
Decentralized, uncontrolled networks
Merging of computer and communications technologies
Ease of publication

### ISSUES IN THE ACQUISITION OF LITERATURE

### DISINTEGRATION OF CENTRALIZED PUBLICATION SYSTEMS

### **PROS**

Wealth of exciting new publications

Availability of formerly restricted (gray) literature

More avenues for distribution

### **CONS**

Disruptions of traditional distribution centers

Escalating prices

Loss of bibliographic control

More gray literature produced

### INFORMATION AS AN INTERNATIONAL COMMODITY

Exclusive and proprietary rights International copyright Marketing/distribution rights Open communications Ease of copying "Ownership"

### INFORMATION AS A NATIONAL RESOURCE

Treasure or treasure trove

### RESOURCE ALLOCATION

Tight budgets, leveraging scarce resources Purchase versus exchange decisions Trades not as interesting as cash

### UNDERSTANDING USER NEEDS AND VALUES

 COPING WITH "SECURITY BLANKET" MENTALITY WANTING OR NEEDING COPIES OF EVERYTHING

Reduced funds for acquisitions

Reduced staff

- LANGUAGE / TRANSLATIONS
- U.S. TECHNOLOGICAL PRE-EMINENCE OR LACK THEREOF
- COMPETITIVENESS
- NATIONAL SECURITY

### **DIFFICULTIES**

DIFFERENCES IN UNDERSTANDING:

**Not linguistic** 

Hiring individuals not organizations

**Contractual relationships** 

Profit as a concept

Personal gain vs. long-term investment

"Only" vs. "Exclusive"

"Yes" doesn't mean "I agree"

### TIME FACTORS

- Investors want quick returns
- Governments discuss and discuss
- Timelines, deadlines and schedules
- Think in days (US): months (Russia)
- Time zones
  - fax vs E-mail
- Bureaucratic travel restrictions

### **MONETARY FACTORS**

- Substantial risk economic and political
- Confusing, unstable government with business with business relationships
- Fund transfers
- Pricing and confusion
- Value of information
- Unstable currency

### STRUCTURAL DIFFERENCES

- Ownership laws are in flux
- Ministries, institutes and Universities
- Who is in charge?
- Shortages vs hoarding and distribution
- Inconsistent quality
- Database doesn't mean electronic

### PRODUCTION ISSUES

- Cover to cover
- Editorial bias
- Spelling
- Getting informative abstracts
- Collection bigs

"He's not a real scientist."

"This is not interesting to you."

Read head alignments





### **LEGISLATION & REGULATIONS**

This database provides access to primary legislative and regulative documents for both the legal professional and those individuals and organizations doing business in Russia. Coverage includes the Constitution of the Russian Federation, all laws, resolutions, decrees, and other legislative and regulatory documents issued from 1990 forward. Subject areas include:

Agricultural Law • Banking • Civil Rights • Economics
Environmental Law • International Relations • Public Administration
Property • Practice of Law • Prices • Real Property • Securities • Taxation

### WHY ACCESS RUSSIA

- PRODUCTS ARE AVAILABLE NOW
  - ✓ Legislation & Regulations on CD-ROM
  - ✓ Business & Economics on CD-ROM
  - ✓ Science & Technology on CD-ROM
  - ✓ UNISON Databases
    - Officials and business persons of Russia
    - Russian Chamber of Commerce and Industry
    - Commonwealth of Independent States, Baltic Countries, Georgia and Azerbaijan
  - ✓ Document Delivery
  - Translations
  - ✓ Custom Reports

### **BUSINESS & ECONOMICS**

The Business & Economics Database covers periodicals. This database includes serials, about 160 newspapers, general reference materials and periodically issued guidebooks, handbooks, and institute report literature of a statistical and/or forecasting nature. It includes all aspects of business, with particular emphasis placed on the development of new enterprises, joint ventures, new product development, and the effects of privatization. Subject coverage includes:

Accounting Banking Commerce Computers (in business)

Economics Finance Industries Labor Markets Management

Marketing Media Public Administration Real Estate Statistics

Technological Trends Telecommunications Trade Transportation

### SCIENCE & TECHNOLOGY

Content of the Science & Technology database is extracted from monographs, current periodicals, serials, conference proceedings, patents, catalogs, technical reports, theses and dissertations, and some general reference materials. Subject areas covered include:

Chemistry • Physics • Mathematics • Astronomy • Geology • Electrical and Mechanical Engineering • Environmental studies • Metallurgy • Composites • Plastics • Computer Science • Transportation • Instrumentation

For more information on ACCESS RUSSIA products and services contact: Access Innovations, Inc.; P.O. Box 40130; Albuquerque, NM 87196 USA; (505) 265-3591 • FAX (505) 256-1080

### **TRANSLATIONS**

The Moscow-based professional staff speaks English, all are college educated, and most hold advanced degrees.

### DOCUMENT DELIVERY

ACCESS RUSSIA will deliver the full text, in Russian, for any of the documents cited in our databases. Further, we have secured for our personnel access to the rich collections of Moscow's libraries—including the Lenin Library—to locate, reproduce, and forward copies of requested documents.

### SPECIAL PROJECTS

In addition to acquisition of documents and/or databases, there are instances in which a custom report for a given organization or event is required, or when data must be analyzed or verified.

Through Access Russia, appropriately trained Russian speaking personnel can be assigned to attend conferences or exhibitions, to gather data, to conduct interviews, or to verify addresses, product lines, or gather other information.

### UNISON DATABASES

The Unison databases contain nearly 25,000 entries on people, ventures and agencies, on three diskettes:

- · Officials and Business Persons of Russia
- Russian Chamber of Commerce and Industry
  - Commonwealth of Independent States, Baltic Countries, Georgia and Azerbaijan





Available on CD-ROM Coverage from January 1990 **Quarterly Updates** Bibliographic Fields in English Titles & Keywords in English

ACCESS RUSSIA has created, in Moscow, a comprehensive, full-text database covering all official legislation and regulations issued by the President of the Russian Federation, the Supreme Council, and the Government of the Russian Federation. The full texts of the documents are in Russian. Bibliographic fields (title, source, abstracts, keywords, etc.) are in English. English abstracts will be added to the CD-ROM as they become available.

This database provides access to primary legislative and regulative documents for both the legal professional and those individuals and organizations doing business

Coverage includes the Constitution of the Russian Federation, all laws, resolutions, decrees, and other legislative and regulatory documents issued from 1990 forward. Subject areas include:

Agricultural Law • Banking • Civil Rights • Economics Environmental Law • International Relations • Public Administration Property • Practice of Law • Prices • Real Property
Securities • Taxation



Business & Economics

Available on CD-ROM Coverage from January 1993 **Quarterly Updates** Bibliographic Fields in English Abstracts & Keywords in English

The Business & Economics Database covers periodicals. This includes serials, about 160 newspapers, general reference materials and periodically issued guidebooks, handbooks, and institute report literature of a statistical and/or forecasting nature. It includes all aspects of business, with particular emphasis placed on the development of new enterprises, joint ventures, new product development, and the effects of privatization. Subject coverage includes:

- Accounting
- Banking
- Commerce
- Computers (in business)
- Economics (interest rates, debt, money markets, privatization, etc.)
- Finance (budgeting, capital formation, foreign investments)
- Labor Markets (recruitment, training, compensation)
- Management (administration, business, engineering)
- Marketing (distribution, product development, sales)
- Media
- Public Administration (news/data on government policies, spending, taxation, and regulations affecting business. The laws and regulations themselves are covered in the Legal & Regulatory database) · Real Estate
- Statistics (demographics, forecasts, industrial, etc.)
- Technological Trends
- Telecommunications
- Trade (barter, import/export and internal)
- Transportation

For more information on ACCESS RUSSIA products and services contact: ovations, Inc.; P.O. Box 40130; Albuquerque, NM 87196 USA; (505) 265-3591 • FAX (505) 256-1080

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Document Language Genuine Number Descriptor(s) Descriptor(s)

393-R
armed forces: property: sales: exports: weapons:
registers: consultants
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OPY#HE: PETHICTPH: FORCE/TETHITH H COMETHER!
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arbitration (administrative law): courts: suits

Text or Document:

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об утверждения Порядка контроля за реализацией и исполь зованием высвобождаемого военного инужества В соответствии с Указом Президента Россичском Редерации от Э ноября 1992 г. N 1518 "О порядке реализации и использования высвобождаемого военного инущества":

1. Утвердить прилагаемый Порядсь

1. Этвердить прилагаемый порядся онтроля да реализацием лиспользованием высвобождаемого военного инущества.
2. Контроль за выполнением данного распоряжения возложить на главное управление военного инущества госкопилущества России. Председатель Конитета — А.Е. Порядок контроля за реализацией и использованием A.E. TyEarn

высвобождаемого военного имущества

высвобождаемого военного инужества
Приложение к распоряжению Госконинужества России
от 3 марта 1993 года N 193-р
Настояжее Положение определяет основные задачи, функция и праиз
государственного конитета России(кой Федерации по управлению
государственным инужеством (Госконинужество России) по осуществлению государственным инуществом (Госков-внущество Россим) по осуществлен-контроля за реализацией и использованием высвобождаеного инущества Миниотерством обороны Российской Редерации, Министерством безопасности Российской Редерации, Министерством внутречени дел Российской Редерации и другими министерствати и ведопствати;

Российской Федерации и другини нивистерствани и ведонствани, инеюцини в оперативном управлении военное инущество.

1. Общие положения
Госкомимущество России организует и осудествляет комтроль за реализацией и использованием военного инущества в соответствования:

3аконом Российской Федерации "О приватизации государственным и муниципальных предприятия в РСФСР", постанов инвеня Вео овмого Совета муниципальных предприятия в РСФСР", постанов инвеня Вео овмого Совета муниципальных предприятия в РСФСР", постанов инвеня Вео овмого Совета муниципальных предприятия в РСФСР", постанов инвеня Вео овмого Совета предиской Федерации от 27 декабря 1991 г. И 1320-1, и аворо предиской Федерации от 31 новета, 1972 г. И 1510 г. И 1510

Accession Number 1300846

Title Title

ZIL to begin production of a unique machine for extreme conditions

Moscow

ZIL nachinaet proizvodstvo unital noj mashiny dlya ehkstremal'nykh uslovij Kommersant'' dejli

Russian Izdatel'skij dom "Kommersant"

Izdatel'skij dom "Kommersant''"

т.

Journal Suvorova, 11.03.93

Author(s)

Publication Date Publication Year 1993 MOSCOW

Geographic Location Country Name Russia newspaper article

Document Type Language

Publishing House

Publisher Publication City

Publication Country

Editors Address Company Name

Descriptor(s)

Russia Moskva, ul. Vrubelya, 4

all-terrain vehicles machine building

automotive vehicles freight transportation emergencies ZIL-4972 all-terrain vehicle

Identifier(s)

ZIL plant

Abstract

ZIL plant
Assembly of the prototype of a freight wheel
Assembly of the prototype of a freight wheel
all-terrain vehicle ZIL-4972 has been completed at the
ZIL-plant. It showed good results during tests. The
vehicle was created following the order of the
Russia's State Committee for Emergencies. According to
experts' opinion, after the operational development
the super all-terrain vehicle will have good prospects
both at the domestic and foreign markets. The
"Vezdekhod GVA" firm was set up to develop and produce
the vehicles. Contact telephone: (095) 277-89-25
44(253)

Issue Number Issues Per Year Illustrations Pagination

Telephone Number ncv Number

p 2 (7-095) 943-97-71 50060

260

### WHY ACCESS RUSSIA

### AN ESTABLISHED PRESENCE IN RUSSIA HEADQUARTERS IN ALBUQUERQUE

- Moscow-based facility
- Russian staff in key positions
- Communications and distribution channels in place
- ✓ Multiple sources
- Provincial and industrial city locations

- Key staff esperience in database design and construction
- ✓ Western marketing and management techniques
- Credibility based on corporate history of providing information services on a worldwide basis
- Key staff very active in professional / trade associations



Междунеродный Центр Научной и Технической Информаций

Аковс Инновайционс Албукирке, Ню Мексика, США

### ХЛАВА Марджорий М К Президент

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### Access Innovations, Inc.

Database Production and Editorial Services Online and CD-ROM Applications

> Marjorie M.K. Hlava PRESIDENT

Post Office Box 40130 Albuquerque New Mexico 87196

505/265-3591 FAX 505/256-1080

Internet: tnaccessi@technet.nm.org

### LIBRARY SERVICES ALLIANCE OF NEW MEXICO

Sally A. Landenberger Technical Library Sandia National Laboratories

Harry Llull Centennial Science and Engineering Library University of New Mexico

Marilyn Von Seggern Owen Science and Engineering Library Washington State University

Rick Luce Technical Library Los Alamos National Laboratory

The Library Services Alliance Of New Mexico

Sally A. Landenberger, Manager Technical Process Sandia National Laboratories, Technical Library

Welcome to the Library Services Alliance of New Mexico's presentation. I'm really pleased that you are interested in hearing about our activities as a burgeoning library cooperative. (Vugraph 1)

Let me begin by identifying those libraries that participate in the Alliance. (Vugraph 2)
They are:

- Los Alamos National Laboratory Technical Library
- University of New Mexico Libraries
- Sandia National Laboratories Technical Library
- Phillips Laboratory Technical Library
- New Mexico Institute of Mining & Technology Library
- New Mexico State University Library

My colleagues and I will try to represent the overall Alliance even though a member of each of the institutions is not present. Let me introduce my colleagues: I am Sally Landenberger, manager of Technical Processes at the Sandia National Laboratories, Technical Library; Harry Llull, head of the Centennial Science and Engineering Library at the University of New Mexico; Marilyn Von Seggern, head of Reference Services at Washington State University; Rick Luce, Director of the Los Alamos Technical Library.

Again, I am pleased to be with you today to present a picture of the Library Services Alliance of New Mexico.

I will be presenting an overview of the Alliance. My colleagues will present activities we have been working on in relationship to our defined goals and objectives. Harry will moderate a short question and answer period at the end. (Vugraph 3)

### History of the Alliance

(Vugraph 4)

Let me begin with a very brief history of our organization.

First of all, like most librarians, we have consistently met and talked with each other informally over the years. Perhaps more communications occurred between like groups such as the academic libraries which met through the New Mexico Library Association, or the laboratory libraries which met through the Special Libraries Association, but nonetheless, we have had a significant awareness of each other, both staff and administration. Also, there has been more communication between the libraries here in Albuquerque because of our proximity.

In January 1991, the three New Mexico Laboratories, Phillips (Department of Defense), Los Alamos, and Sandia (Department of Energy), formally organized as the Strategic Alliance. The intention of the Strategic Alliance was to form a "new paradigm for the advancement of science and technology." There were a number of prime areas of interest, including national defense, energy, space and transportation for which the Strategic Alliance wanted to provide technical support and cooperation among the labs.

At this point, Barbara Newton of Phillips was instrumental in seeing the Strategic Alliance as a real opportunity for our libraries to participate as an infrastructure to support this effort. In addition, Harry Llull from the Centennial Science and Engineering Library of UNM was seen as a strong ally. Discussions began to formalize a relationship between the laboratory libraries and the Centennial Science and Engineering Library at the University of New Mexico. At the very last minute, New Mexico State University was asked to participate. A memorandum

of agreement was signed in January 1992 by each of these institution's highest ranking officer, and the Library Services Alliance of New Mexico came into being. New Mexico Tech was added the following year, and with this addition, the Alliance represents the major science and technology resource in the state.

That first year we were able to utilize the services of Marilyn Von Seggern, who was on sabbatical from the University of Washington, to help us set the foundation for our cooperative. We could not have accomplished as much as we have without her assistance.

### **Consortium Issues**

(Vugraph 5)

To set the stage, there are a number of issues to consider in terms of consortium. First of all, there are only a little more than 600 libraries which have formed and termed themselves cooperative groups. And of this number, only 40% are considered multi-type. Generally these are school, academic, or public libraries. Pulling together academic and laboratory libraries from both the Department of Defense and Department of Energy specializing in science and technology such as we have is relatively unique, even among the group.

There are major problems to overcome to achieve the idea of cooperative effort. First is the dissimilarity in organizational structure as well as policies and procedures. A second challenge for our Alliance is the geographic separation. The farthest distance between our sites is 320 miles. Even though we try to compensate via phones, FAX, and E-mail, sometimes face-to-face meetings are essential, and sometimes they are hard to arrange.

Lack of standardization is also an issue. This includes differences in collection development analysis, online catalogs, etc. Further, this initiative started and continues without extra staff or money.

However, the foreseen benefits make it attractive for us to cooperate and try to overcome these obstacles. These benefits include: potentially providing some economic relief due to diminishing dollar resources caused both by downsizing and inflation; coping with expanding user expectations in terms of delivery of information. These expectations serve as pressure points for each of our institutions to deliver information faster and in electronic form. And, the Alliance provides the opportunity to expand out access to scientific and technical resources through cooperative collection development activities and reciprocal borrowing privileges.

### Alliance Members' Strengths

(Vugraph 6)

Here is a quick listing of the collective strengths each of the institutions brings

to the Alliance. It is important to realize that the combined collections and capabilities of the Alliance Libraries compare very favorable with some of the major research libraries in the U.S. (and that our combined resources strongly emphasize science and technology.)

### Strategic Plan

(Vugraph 7)

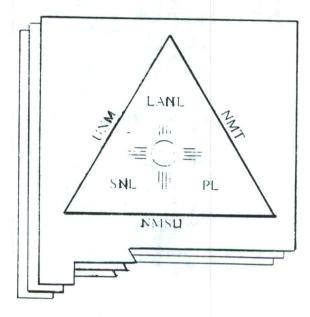
One of the first orders of business was to develop a plan for the Alliance. We began with a session to formulate our mission and vision. This two-day meeting was a difficult one. Six individuals representing six different institutions tried to forge a common view which provided a shared understanding and sense of direction and yet met individual institutional needs. These statements capture our intention.

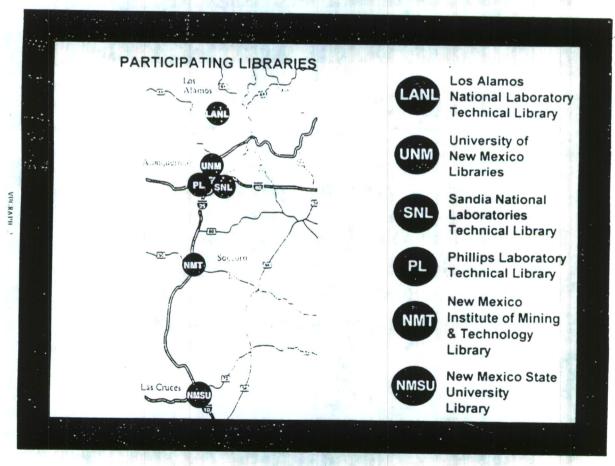
### Goals and Objectives

(Vugraph 8)

From our mission and vision comes the natural follow on of our specific goals and objectives. They are ambitions, to say the least. These critical success factors are currently being addressed and my colleagues will discuss them. Harry Llull will begin with Goal #3 which centers on collection resources, the one in which we have been most active.

### LIBRARY SERVICES ALLIANCE OF NEW MEXICO





- Activities and directions in relation to goals and objectives
  - Collection development
  - Periodicals Overlap Study
  - Technology and document delivery
  - Reference and public relations
- Questions and Answers

### **HISTORY OF THE ALLIANCE**

- Informal meetings of library directors and staff
- Establishment of Strategic Alliance Jan. '91
- Opportunity to formally organize
- Memorandum of Agreement Jan. '92
- Technical support via sabbatical assistance

- Obstacles to cooperation
  - Dissimilar organizational structure
  - Geographic separation
  - Nonstandardization of collection development
  - Lack of resources
- Benefits to cooperation
  - Relief for budget constraints
  - Rising user expectations
  - Expand access to resources

### **ALLIANCE MEMBERS' STRENGTHS**



Los Alamos National Laboratory Technical Library



University of New Mexico Libraries



Sandia National Laboratories Technical Library



Phillips Laboratory Technical Library



New Mexico Institute of Mining & Technology Library



New Mexico State University Library physicals, chemistry, SCI (1945-) AEC publications

engineering, US patents depository, Map & Geographic Information Center

materials sciences, nuclear science & technology, DOE reports

aerospace and astronautics, DOD reports

geosciences, geological engineering, U. S. Geological Survey, Bureau of Mines publications

agronomy, animal sciences, codes and standaards

Vision: The vision of the Library Services
 Alliance of New Mexico is to be a world class
 information provider to our primary
 communities while enhancing the scientific
 and technical research competitiveness for
 New Mexico.

### **GOALS AND OBJECTIVES**

- GOAL 1: Provide access to the electronic resources of Alliance member libraries.
- GOAL 2: Deliver information products in a timely manner by making Alliance lending requests first priority.
- GOAL 3: Maximize Alliance ownership of resources.
- GOAL 4: Provide value-added information to researchers in the Alliance community.
- GOAL 5: To fulfill the Alliance mission and vision, develop awareness of the Library Services Alliance throughout the state.

### THE COLLECTION DEVELOPMENT PROGRAMS OF THE LIBRARY SERVICES ALLIANCE OF NEW MEXICO

### Harry Llull, Director Centennial Science and Engineering Library University of New Mexico

### Introduction

There were a number of factors both external and internal to New Mexico that helped create an environment within the state leading to the signing on January 27, 1992, of the Memorandum of Agreement, officially initiating the Library Services Alliance of New Mexico. Some of the external factors that affect all libraries included the increased use of electronic communications and, of course, the serials crisis. Although prior to the forming of the Alliance there was not a structure for the six science and technology research libraries to work together. there certainly were other forums within which our institutions and librarians worked together. The New Mexico Library Association and the Special Libraries Association Rio Grande Chapter are two prominent organizations in the state. The academic libraries formed a coalition during the mid-80s which included not only the three academic members of the Alliance but all the academic libraries of the state of New Mexico. There were, of course, many other connections between our institutions including the head of the Los Alamos National Laboratory, also serving as a regent of the University of New Mexico, and many interactions between the labs and the universities on joint research projects.

More directly related to the science and technology libraries of each member, there have been recent changes in directors and facilities. In February 1988, the University of New Mexico opened the Centennial Science and Engineering Library as a branch of the General Library System. The largest science and technology collection in the state had a director and staff specifically focused on science and engineering, with a heightened interest in interacting more formally with the science and technology librarians located at the other research state universities and the national and Air Force laboratories.

Shortly after the Centennial Library opened, New Mexico Institute of Mining and Technology began (and has completed) a new library building project. More recently, New Mexico State University completed a new library building project and will soon begin renovating their older building to house the science, engineering, and business collections. The Phillips Laboratory Technical Library

underwent a major upgrading of their facilities and implemented the Sirsi system online catalog. The technical libraries at both Sandia National Laboratories and Los Alamos National Laboratory experienced changes in the administrative personnel of their respective libraries, as did the library at New Mexico State University.

With the changes in personalities, the upgrading of facilities and electronic online catalogs, and the increased emphasis on cooperative programs and coalitions to more effectively address the delivery of information services, it seemed natural for the six members of the Alliance to begin addressing just that issue. The heads of the Phillips Technical Library and the Centennial Library and the head of Technical Processes at Sandia National Laboratory started meeting together in the early 90s specifically to address collection overlap. All three libraries were located in Albuquerque and, with the serials crisis truly out of hand, we began looking at both the duplication and uniqueness of our collective and respective collections.

In 1991, the three laboratories formed the Strategic Alliance which had working groups devoted to specific research projects as its organizational structure. The working groups of the Strategic Alliance often included researchers from one of the academic research institutions even though the academic institutions were not members of the Strategic Alliance. Barbara Newton of Phillips suggested to the Albuquerque library group that we attempt to become a working group of the Strategic Alliance. Harry Llull researched the library literature of cooperative collection development programs and coordinated the drafting of the Memorandum of Agreement that was signed not only by the Albuquerque library group but also by the three members located outside of Albuquerque.

### The Memorandum of Agreement and Collection Development Working Group

The Memorandum of Agreement (MOA) clearly reflects the interest of the Alliance members to cooperate in the area of building collections and sharing those collections among the members. The following statements are from the MOA:

- 1. "The initial goal is to improve the availability of scientific and technical journal holdings among the six libraries through the identification of core collections and unique titles, coupled with enhanced access to the collections."
- 2. "The Alliance intends to improve its ability to respond to the demand for new and unique serial titles not currently in any of its collections."

3. "Through this cooperative effort, the Alliance expects to meet a higher level of researchers' needs from the collections of the members of the nation."

The Collection Development Working Group had a clear mission from the MOA and actually began meeting before the overall strategic plan of the Alliance was officially adopted. However, the strategic plan of the Alliance continued to address the importance of a cooperative collection development, management, and delivery program for the Alliance. The strategic plan states as one of its five goals: "Maximize Alliance ownership of resources." To carry out that goal, the following were agreed upon by the Directors Group:

- 1. "Identify and analyze strengths, weaknesses, and changes in Alliance collections."
- 2. "Identify unique resources."
- 3. "Monitor and analyze market conditions and its impact on the collections of the individual members and the Alliance overall."

The Collection Development Working Group with a representative from each of the Alliance libraries saw as its mission "to find ways of implementing the goals as stated in the Memorandum of Agreement." Initially the charge to the Working Group included the following:

- 1. "Evaluating the feasibility of relying on each other through a cooperative collection development program."
- 2. "Evaluate and identify areas of specialized collections that would be the responsibility of a particular member of the group."
- 3. "Addressing the access issues related to relying on members to provide other members articles and books."

### Accomplishments and Issues

In addition to having a representative from each library of the Alliance, we were extremely fortunate to have Marilyn Von Seggern, a librarian from Washington State University science library, also participate actively in the projects of the working group. Marilyn was on a year's sabbatical leave and worked with the Directors Group of the Alliance as well as the Collection Development Working Group. Initially, the group had two very important priorities. Almost all members were implementing a serials cancellation project during 1992/1993. The working group shared information in terms of use studies, evaluating the collections, and

bringing faculty and researchers into the decision-making process. Another important priority which would help us carry out the serials cancellation priority was to simply learn more about each other's collection and institution. Both of the projects produced data which was compiled by Marilyn. A notebook was produced and sent to each member library which included facts and brochures about the collections, libraries, and institutions. Secondly, the group decided to examine the level of overlap for titles costing over \$1,000. We found a high level of duplication of holdings among Alliance members for these titles. When I produced a report based on only the titles costing over \$2,000, the overlap rate was over ninety percent of the titles. The information was very helpful when adding use study data and pointing out both factors of low use and duplicate copies within the state to our respective faculty and/or researchers.

One very important premise that the Collection Development Working Group agreed upon was that each library had to make decisions based on their respective institutional needs. Each library had to address the needs of its researchers and budget. However, with the sharing of information on what those needs were and what decisions those needs required, it was hoped that as a group we could limit the number of unique titles that were canceled. Individual libraries are not assigned specific subject areas to cover or titles to keep.

Document delivery is an important underlying issue for the Collection Development Working Group and is a priority it shares with the Technology Working Group. Within New Mexico, a Pony Express service has been implemented which makes stops each day at each of the Alliance member libraries. Transmission of documents by Ariel has been tested between UNM's Centennial Library and the Technical Library at Los Alamos National Laboratory. However, we still have the basic obstacles to address in this area, staffing and procedures. The three academic libraries already participate in reciprocal borrowing of books through both interlibrary loan and the Passport Program which allows students and faculty to check out material on site at another institution. The laboratories are investigating a similar program among those three members with the hope of eventually implementing such a program that applies to the Alliance. However, access to two of the laboratories in Albuquerque is not open to everyone, as are the universities and the Los Alamos Technical Library. Other procedural issues which will need to be addressed include the borrowing and lending of special material such as reference books, bound periodicals, and other materials that normally do not circulate or have restricted loan periods.

Things have moved much faster in terms of access to library catalogs of each member library over the Internet. The group has access to four of the five catalogs of the six members with UNM and New Mexico Tech using the same system, Libros. Although this allows us to check for periodical holdings of each member,

the ideal approach would be to have a union list of serials for the Alliance members. The New Mexico State Library produced a CD-ROM product which included Alliance members and other libraries throughout the state. That product is not as user friendly or up-to-date as is needed by the alliance. The eventual implementation of the Z39.50 software may help solve this problem, allowing each of our patrons the ability to search library catalogs with one's home system menu.

#### Conclusion

Although the Alliance and the Collection Development Working Group are still in their infancies, there have been many positive experiences. We have found that by communicating on a regular basis through electronic mail and telephone conference calls we can overcome the barrier of geographical separation in a large, sparsely populated state. Working meetings where all members come together at one of the Alliance Libraries have also been used successfully. The sharing of information and pooling of expertise has probably been the most profitable aspect of the working group. The more our individual staff interacts with staff at other Alliance member libraries, the more likely it is that solutions to problems and the implementation of new programs will be successful.

#### The Reference Working Group And Promotional Programs Of The Library Services Alliance Of New Mexico

The newest working group of the Alliance is the Reference Working Group. The need for this group is addressed in the strategic plan goal that states: "Provide value-added information to researchers in the Alliance community." The value-added aspect is defined as pooling our staff expertise and giving access to unique holdings in each of our libraries in order to provide higher levels of information service to an individual institution than can be provided by the staff and collections of that institution alone. The strategic plan goes on to list four ways of carrying out the overall goal of the group.

- "Develop expert referral network of Alliance library staff."
- "Develop expert referral database of Alliance researchers."
- 3. "Prepare and submit grants to obtain resources to subsidize specific Alliance activities."
- 4. "Assess the information needs and information-seeking patterns of researchers in Alliance institutions through participation in studies or focus-group interviews of scientists."

Besides initiating a new working group, the Directors Group outlined a model for the Alliance when recommending new working groups. The Directors Group makes the decision that a new working group is needed and determines the membership of the group. A member of the Directors Group takes the responsibility of calling the first meeting of the working group and works with the group to develop a charge that is then sent to the Directors Group for approval. However, working groups are encouraged to choose a chair from their membership, relieving the director who convened the group from continuing to be involved in the specific projects of the respective working group. Sally Landenberger of Sandia and a member of the Directors Group is in the process of carrying out that model and developing the charge with the members of the Reference Working Group. In addition to the strategic plan, the members of the Reference Working Group came up with the following additional ideas to add to their charge:

- 1. "Improve user satisfaction and confidence in reference service."
- 2. "Provide forums for professional and para-professional reference and support staff counterparts to compare functional and physical similarities and differences in respective organizations."
- 3. "Maximize creative situational problem solving."
- 4. "Identify online services available at each institution and record this information in a database."
- 5. "Highlight and track Alliance referral services within the Alliance."
- 6. "Develop a reference database for extensive or highly pertinent reference questions that could be shared."
- 7. "Consider sabbaticals between professionals."

During her sabbatical, Marilyn Von Seggern did begin working with Phillips Laboratory Technical Library on the information-seeking patterns of scientists and engineers. The Phillips study is based on Thomas Pinelli's questionnaire which is sponsored by the National Aeronautics and Space Administration. This example points out one of the strengths of the Alliance. Although Phillips is in a position to do a formal study, the other members of the Alliance may choose to carry out this goal based on their respective needs and staffing. The gathering and reporting of the information is the important part. All members of the Alliance are not expected to carry out all Alliance goals in the same way or at the same pace as long as each member attempts to move in the same direction. Individual members have found it useful to use alliance goals as a point of leverage and negotiation within their own institution in order to get support for new programs.

#### **Promotional Programs of the Alliance**

The last goal of the strategic plan states the following: "To fulfill the Alliance mission and vision, develop awareness of the Library Services Alliance throughout the state." Although the members of the Alliance have to consider their own constituencies as first priority, the group does not see itself as operating in a vacuum from the rest of the state or region. For example, one of the quarterly, physical meetings of the Directors Group is held each year in Santa Fe at the state library. Half of the day is devoted to meeting with the state librarian and other staff of the state library to bring each group up to date on their respective projects and plans.

In March of 1993, the Directors Group gave a presentation at the annual New Mexico Library Association meeting in Las Vegas, New Mexico. This was our first opportunity to introduce the Library Services Alliance to our library colleagues across the state. That was followed up with an article in the New Mexico Library Association Newsletter, written by Marilyn Von Seggern. We are now giving an updated version of the Alliance presentation to the Military Librarians Workshop in Albuquerque.

A very successful project of the Alliance was the creation of a brochure describing the Alliance and each of its members. This project was coordinated and produced by Jeanne Howard of New Mexico State University. For that brochure, a logo for the Alliance was developed. That logo consists of the Zia symbol, inside a triangle, which is inside an outline of the state of New Mexico. The three laboratories are named around the Zia symbol, inside the triangle. The three research universities are named around the outside of the triangle, inside the outline of the map of the state. The brochure, strategic plan, and logo have been our three primary means of printed communication to our respective administrators and research communities. A report covering the first two years of the Alliance is in production, to be followed by annual reports covering the activities and progress of the Library Services Alliance each year.

As stated in the strategic plan, a goal of the Alliance is to "Supply alliance services to the Rio Grande research corridor to assist in technology transfer and basic research." This goal reflects the overall theme and mission of the group. All six members are part of the Rio Grande research corridor, which stretches from Los Alamos in the far north of the state to Las Cruces in the southern-most part of the state. By working together, the members of the Alliance feel that collectively we can have a positive impact on and facilitate the progress of scientific research and technology transfer throughout the Rio Grande corridor.

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# SERIAL OVERLAP IN THE COLLECTIONS OF THE LIBRARY SERVICES ALLIANCE OF NEW MEXICO

# Marilyn Von Seggern Owen Science & Engineering Library Washington State University

When I began working with the Library Services Alliance of New Mexico in the Fall of 1992, all member libraries were expecting to undertake serial cancellation projects because of continued price inflation. Though all six libraries are represented in the New Mexico Union List of Serials, no separate database of combined Alliance serials existed to facilitate analysis of the collections. The collection Development Working Group decided that the most that could be undertaken at that point was to create a combined list of titles costing \$1000 or more. There are approximately 575 titles in this category, about 2% of the current subscriptions of Alliance libraries. This paper reports on overlap and uniqueness among the +\$1000 journals of the Alliance and on the characteristics of the serial cancellations of 1993.

While a complete union list of serials is a highly desirable collection development tool for learning about collection strengths and subject spread, an analysis of expensive titles is valuable in itself because of the disproportionately large percentage of the budget these titles corner. In the newsletter of the University of Washington Health Sciences Library last year it was reported that the 50 most expensive journal titles in their collection, 1.1% of their current subscriptions, cost \$126,220 or about 13.3% of their serial renewals for 1992. They ranged in price from \$1200 to \$15,000. Coincidentally, 37 out of 50 titles (74%) were published in countries other than the United States, a characteristic that was examined for these +\$1000 titles also. In another study of five university libraries, titles costing over \$200 accounted for 12% of titles but 64% of the total journal costs. The state of the serial renewals for 12% of titles but 64% of the total journal costs.

For purposes of collection development evaluation and decision-making, information about the high-cost end of the journal spectrum can be valuable. The first aspect of this subject to be examined was overlap.

Overlap studies are done with a variety of objectives in mind. William Gray Potter, in a 1982 review of overlap studies, defined four categories: "1. Studies undertaken in connection with union catalogs...the optimum composition of a group of libraries to assemble the greatest number of distinct titles. 2. Studies of

the feasibility of centralized processing...the extent to which a group of libraries acquire books in common to determine if a centralized processing operation is desirable... 3. Studies of cooperative programs... 4. Research studies...achieving a better understanding of the phenomenon of collection overlap."<sup>3</sup>

Potter presented three findings in his review: "First, the extent of collection overlap is dependent upon the age, size, and type of libraries involved in that the probability of overlap increases with size of library, but decreases when the libraries are of different age and type." The Library Services Alliance is an example of greater diversity with varied age and type within the sci/tech collection area. Age-wise, the academic libraries date back to the late 1800s while the laboratory libraries were formed in the middle of the next century. With a maze of institutions of higher education and those of government research, the missions of the institutions and thus the libraries are also quite varied.

Potter's second finding is that "of all titles held in common by a group of libraries, a large proportion of them will be unique to one library." The uniqueness rate among the studies he reviewed ranged from 50 to 86%. It was demonstrated that regardless of size, all libraries have something to offer to a cooperative. That point was borne out in this study where all libraries held unique expensive journals, ranging from 8 in one of the smallest libraries to 66 unique titles in one of the largest.

Third, "schemes aimed at cooperative collection development may not be needed to avoid duplication among collections." A recent article about the Research Triangle University Libraries in North Carolina reports that their rate of unique titles is 76%, which falls neatly within the range from the 1982 review. One principal of successful cooperation over six decades of experience for the Research Triangle Libraries is that of institutional self-interest. They say that "agreements must grow organically out of academic programs and collection strengths."

Very few of the overlap studies included in Potter's review addressed journal overlap, as serials have been less well controlled bibliographically and have lagged behind again in becoming automated. More journal overlap studies have been done recently as a result of the serials crisis and in analyses of the collections of cooperatives. Among studies calculating the percentage of unique titles, the rate has varied from the low 40s to a high of 76%. By comparison, a uniqueness rate of 33% was found in the +\$1000 journal subset of the Alliance (table 1).

#### Table 1 LIBRARY SERVICES ALLIANCE + \$1000 JOURNAL LIST

One owner	# of titles	% of list
Two owners	191	33
Three owners	133	23
Four owners	72	13
Five owners	44	8
Six owners	12	2
Total	575	100

#### Cancellations

Three Alliance libraries proceeded with journal cancellation projects in 1993. This study analyzes the titles from two projects plus a small number of titles canceled by another library. An analysis of titles canceled at five Midwestern ARL libraries was the subject of another study reported in March 1993. Chrzastowski and Schmidt looked at cancellations over a period of three fiscal years, 1987-90. The study hypothesized that a large amount of overlap would be found in the titles being canceled. On the contrary, only 4% of the 6,503 titles canceled were held by more than one library, for a 96% unique title cancellation rate. Their profile of the at-risk journal is a high-cost, English-language title in a science subject area. This research is a point of interest not for purposes of comparison with the findings here because the studies are very different, but to highlight the importance of looking at not only what makes up our collections but also what is being canceled. That unique titles are disappearing at this rate from our libraries should be alarming to the library community.

The most limiting factor in the Chrzastowski and Schmidt study may be the brief time period from which the cancellations lists were taken. Some participants in the study could have been canceling for some time while others may have avoided it up to that time, a variable which would have greatly affected the data. For example, one library in the study, Ohio State University, was canceling only duplicates during that three-year period.

This look at the Library Services Alliance at-risk journal is limited to titles canceled from the +\$1000 list. Up to this point in 1993 approximately 200 titles have been canceled. Forty-five, or 23% of those titles, were from the +\$1000 list (8% of the list). Seventeen unique titles were canceled which is 8.5% of the total cancellations, or 9% of the expensive unique titles. To draw a profile of the expensive canceled titles, subject, publisher, and beginning date of publication were examined.

**Subject-**-the Library of Congress classification was used to determine the subject spread of the expensive titles, the unique titles, and the cancellations (Table 2).

Table 2
LIBRARY SERVICES ALLIANCE
CHARACTERISTICS OF JOURNALS CANCELED IN 1993

#### **SUBJECT**

LC Class.	% of +\$1000 list	% of unique titles	% of canc. list
Q-QA	12	9.5	22
QB-QE	51	33	33
QH-QR	14	18	18
R-S	3	7	4
T	19.5	30	20

Slightly over half of the +\$1000 journals are in the physical sciences (QB-QE), largely physics and chemistry, followed by technology with nearly 20%. The unique titles and canceled titles are more evenly distributed among physical science, technology, and life sciences. It appears that a disproportionately large amount of mathematics journals were canceled, 22%, with the physical sciences collections taking a smaller cut. By way of explanation for the comparatively low holdings and cancellation numbers in the life sciences and applied life sciences (QH-QR, R, and S), the titles of the University of New Mexico Medical Library were not included in the study and institutions with the stronger life sciences collections did not participate in cancellation projects in 1993.

**Publisher-**-the publishers of the +\$1000 canceled journals are largely foreign, with a substantial number of domestically distributed translated Russian journals (table 3).

# Table 3 LIBRARY SERVICES ALLIANCE CHARACTERISTICS OF JOURNALS CANCELED IN 1993

PUBLISHER	%
Foreign Domestic	64.5 9
Russian Translation to English	26.5

**Beginning date of publication--**Most of the canceled journals began publication between 1960 and 1980. The older runs of journals, at least in this subject, were not being canceled (table 4).

#### Table 4 LIBRARY SERVICES ALLIANCE CHARACTERISTICS OF JOURNALS CANCELED IN 1993

BEGAN PUBLISHING		%
1900-1949		4.5
1950-1959	1	5.5
1960-1969		0
1970-1979	3	1
1980-Date		6.5

#### **Questions for Further Study**

What questions follow this analysis? The Chrzastowski and Schmidt study posed these questions: What is the impact of serial cancellations on a collection? Are canceled titles important to the collection? How do cancellations affect other members of a library cooperative? Interlibrary loan statistics could provide substantial answers to these questions, both for an individual library and a cooperative.

The following questions arose from the Library Services Alliance data: How does the +\$1000 journal subset compare to the total serial collections of the Alliance libraries? For example, does the percentage of unique expensive titles hold true for the total serial collections?

Concerning cancellations, what has been the progression of cancellations for Alliance libraries over the past 10 to 20 years? What subject areas have been reduced more than others? What is the profile of the at-risk journal? Perhaps most importantly, how has the consortium affected cancellation, retention, and ordering decisions?

Our library collections have been heavily impacted in the last few decades not only by budget restrictions and repeated cancellation projects but also by innovations in document delivery, sharing collections, and access to electronic media. A better understanding of our resources, whether the potential of shared collections, the profiling of losses and their effect on collections, or other analysis, will enable librarians to better determine future directions.

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# LIBRARY ALLIANCE OF NEW MEXICO TECHNOLOGY WORKING GROUP

Richard E. Luce, Director Research Library Los Alamos National Laboratory

#### **Background**

When the Library Alliance of New Mexico was formed to facilitate resource sharing, the need to use technology to accomplish that goal was clear even to the casual observer. Geographical distance is a significant consideration for doing business among the Alliance members. It takes about 6.5 hours to drive from the northern-most member, Los Alamos, to the southern-most member, NMSU, in Las Cruces. (Vugraph 1)

To implement specific goals of the Alliance, the Technology Working Group was formed. One member from each institution, typically the system librarian, was designated to represent that member. From the outset, we hoped that this would provide a knowledgeable point of contact for system and technology issues for each member, as well as for providing a forum for information exchange and a collective opportunity for professional growth via increased contact with their peers.

One of the early issues we struggled with was the question of access to each of our online catalogs. As is common with many resource sharing efforts, each member of the Alliance has a different vendor-supported system. For example, New Mexico State University (NMSU) has a VTLS system; University of New Mexico (UNM) has an innovative interface and their system also supports New Mexico Tech; Phillips Laboratory has a Sirsi system; Sandia currently is migrating to a Dynix Marquis system; and Los Alamos recently upgraded our system to Geac Advance. Since each of the member institutions has good connections to the Internet, the Alliance decided to rely on those connections. The issue of putting the Laboratory online catalogs on the Internet was a matter of re-thinking access to our collections and an opportunity to pave some new ground.

#### Strategic Plan Goals and Objectives

The following is a discussion of Alliance goals and objectives, taken from our Strategic Plan, that impact the Technical Working Group. The strategic planning process proved to be a valuable forum to collect, prioritize, and articulate our priorities. Because the Alliance has been a totally voluntary, unfunded effort, it

was important that we determine where we desired to place emphasis on our technology efforts. The first two goals capture a piece of our vision and the objectives represent implementation strategies we felt were relatively achievable over a period of time.

## Goal 1 - Provide access to electronic resources of Alliance member libraries (Vugraph 2)

## Objective 1.A - Establish standards to facilitate the use of information technology in support of Alliance goals

Without standards, technically we would be spinning in circles. Three techniques have been used on connecting heterogeneous systems:

- 1. Pass-through, which shows the "foreign" system you connect to in its native mode. While this is technically the easiest solution, it has generally been judged to be user unfriendly, given the proliferation of different systems available, because it requires the user to learn the command structure of the foreign system.
- 2. Interpreted Common User Interface systems, such as the IRVING(1) and SEFLINK(2) efforts. These efforts translated commands and application screens into a common user interface. This solution was judged to be too expensive for the Alliance.
- 3. Transparency, which would allow a foreign system to appear to be the same as the local system. This has been the dream of the early Open Systems Interconnection (OSI) efforts in 1978-1985 and the promise of the Z39.50 and Z39.58 protocols we have been hearing so much about since 1986. It now appears that in 1994, the commercial suppliers are ready to start delivering Z39.50 products. Note that the commercial Z39.50 products will not be "free" or a panacea, but an evolving capability.

The Alliance selected the transparency option since market forces have finally prompted the vendor community to respond to this issue. The Alliance Technical Group has agreed to focus on the NISO Z39.50 standard which defines the application level protocol for query search and retrieval and the NISO Z39.58 common command language standard. SR (Search and Retrieval), ISO Draft International Standard (10162/10163) is the international version of Z39.50. The protocol provides a framework for online catalog users to search remote catalogs on the Internet using the commands of their own local systems. We, individually, will need to put pressure on our vendors to supply the appropriate server software as soon as possible.

#### Objective 1.B - Provide access to Online Public Access Catalogs of members

This objective is predicated on direct telnet connections, which might be from the local system on a menu with hidden telnet script or from a Gopher or Mosaic Interface between member systems through the Internet. We already have pass-through connects for the systems from UNM, NMSU, NM Tech, Los Alamos, and Phillips. The second step is to move from the pass-through mode to implementation and support of Z39.50. We expect to start making that capability available in the first half of 1994. One objective for the full implementation of Z39.50 will be the removal of logins required on some systems.

## Objective 1.C - Study and report on opportunities to pool resources for cost-effective sharing of electronic databases

We hope to be able to extend the concept of resource sharing from traditional paper documents such as books and reports to that of pooled resources using electronic databases. At the moment, the database publishing industry has not figured out cost-attractive mechanisms to support this and provide them with comfort that they are protecting their economic investments. Consequently, we will look for opportunities to load combined institutional databases where ownership of data is not an issue.

#### Objective 1.D - Serve as publisher of Alliance-generated research

One of the mechanisms we can use to facilitate electronic resource sharing is making our own research more readily available to the Alliance. Los Alamos has taken a leadership position in the support of an electronic scientific pre-print database which can be a prototype for the Alliance.

In response to the needs of the particle-theory community, Paul Ginsparg of T-8 at Los Alamos wrote software that receives and distributes many thousands of pre-prints over the various e-mail networks. The database stores articles in Tech (a precursor to Postscript) and can send files in either Tech or ASCII. Since the system was put into operation about 2 years ago, it has been received with great enthusiasm not only in particle physics, but in many other fields of science. This system not only provides titles (which "Spires" at SLAC has done for years), but Ginsparg's system provides entire papers very rapidly. There are now over 15,000 pre-prints on the system, stored at a cost of about 5 cents a paper plus network transmission costs. The system receives about 20,000-25,000 queries per day from around the world.

## Goal 2 - Deliver information products in a timely manner by making Alliance requests first priority (Vugraph 3)

Objective 2.A - Conduct a 6-month test of Ariel between LANL and UNL

Evaluate Ariel hardware.

UNM and Los Alamos agreed to purchase hardware and software to evaluate RLG's *Ariel* system. Ariel provides software to scan and send fax transmissions over the Internet. The obvious benefit was the test period that allowed evaluation without all members needing to purchase expensive equipment.

• Evaluate staffing impact to support the activity.

Staffing turned out to be the difficult part of using this technology. As very real constraints in staffing exist in each library, the ability to respond in a timely manner to requests for fax transmission of journal articles is a difficult issue.

Make recommendations to Alliance Directors Group.

The two test participants have decided to upgrade their *Ariel* application to RLG's version 2, which will be available in mid-1994. (Version 2 is not upwardly compatible with version 1.) *Ariel* was recommended only if sufficient volume justified it.

### Objective 2.B - Provide 24-hour turnaround for journal articles held by an Alliance library

This goal, while quite strategic for some of the members, has proven to be elusive. Much of the difficulty is the question of integrating appropriate technology, such as *Ariel*, with staffing considerations. The lessons learned in other consortia related to funding and resource allocation issues will need to be learned by the Alliance at our own pace.

#### **Network Linking Technology**

The following network linking diagram (attached) provides an overview of our network. (Vugraph 4)

#### REFERENCES

- Luce, Richard E. "Connecting Heterogeneous Local Systems:
   Implications for Resource Sharing." Fiels and Naylor. <u>Delivery of Information and Materials Between Libraries: The State of the Art.</u>
   Proceedings of the June 1990 ASCLA Multi-LINCS Preconference.
   Association of Specialized and Cooperative Library Agencies, American Library Association, 1991.
- 2. Luce, Steele, and Walters. "The IRVING Library Network: Linking Local Dissimilar Systems." Library Hi Tech, Consecutive Issue 24, Vol. 6, Number 4 (47-58), 1988.

#### **TECHNOLOGY WORKING GROUP**

- Background
- Strategic Plan Goals & Objectives
- Network Linking Topology

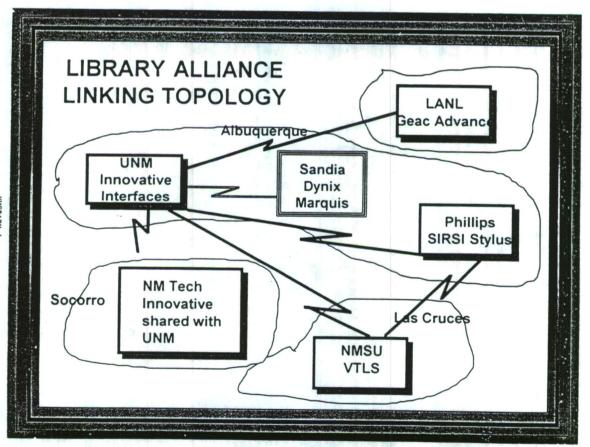
# Strategic Plan Goals - Technology Working Group

Goal 1: Provide access to electronic resources of Alliance member libraries

- Establish standards to facilitate the use of information technology in support of Alliance goals
- Provide access to Online Public Access Catalogs of members
- Study and report on opportunities to pool resources for cost-effective sharing of electronic databases
- Serve as publisher of Alliance-generated research
  - evaluate LANL prototype (HEP pre-prints database)

Goal 2: Deliver information products in a timely manner by making Alliance requests 1st priority

- 6-month text of Ariel between LANL and UNM
  - Evaluate Ariel hardware
  - Evaluate staffing impact to support the activity
  - Make recommendations to Alliance Directors Group
- Provide 24-hour turnaround for journal articles held by an Alliance library



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#### FY 93 AIR FORCE LIBRARY REPORT

#### Barbara Wrinkle Presented at the Military Librarians Workshop 16-18 November 1993, Albuquerque, New Mexico

As the "Air Force World Turns," we are trying to cope with downsizing, rightsizing, realignments, new policy directives, replacing Air Force regulations with Air Force Instructions, composing corporate standards, revising metrics, and whatever happens to be the "crisis of the day." The roller coaster is gaining momentum --very quickly.

However, not everything is gloom and doom! Our Agency moved into a high rise office building located near the San Antonio International Airport. It is amazing how new furniture and color coordinated work areas enhance the work environment. Even the heat and air conditioning works.

We will also have a new name soon, probably sometime in December, the Air Force Services Agency, with the acronym AFSVA.

Ms Annette Gohlke, Director of the Air Force Library and Information System, participated in an Information Resource Center Concept Working Group, along with Information Management and Visual Information Services, to identify a "onestop shop" information center on Air Force installations. The final report identified general libraries as the office of primary responsibility (OPR) to provide commercial, government, and corporate information on each Air Force installation. Information Management and Visual Information Services will be merged with the general libraries after they are converted into an electronic format. A platform to deliver internal and external access will be developed and implemented during the next 3 to 5 years. Technical and academic libraries will continue to support their special missions.

Air Force Regulation (AFR) 215-15, Air Force Library and Information System, will be replaced with Air Force Instruction 34-113. It is now in the coordination channels in Washington. We do not have a firm publication date; however, we hope it will be available within 6 months.

While many libraries are losing manpower, Air Combat Command (ACC) has managed to get approval for 23 reference librarians positions. Most of the positions have been filled; however, 3 positions are vacant. Please see Alice Roy, the Command Librarian, if you are interested.

The funding lost in FY 93 was re-gained in FY 94. We pray everyday that those that giveth doeth not taketh away.

Many of our libraries are involved in automation projects. Some are second generation systems while others are involved for the first time. We have a goal of having all of our libraries automated by 1998.

A public relations campaign designed to promote all types of libraries, services, and resources was launched in 1993. The theme "The Air Force Library and Information System - Your World-Wide Information Connection" promotes libraries as a resource sharing network which harnesses new technologies to access and deliver information anywhere in the world and improves mission effectiveness.

Through our Central Procurement Program we are continuing to fund products which will help libraries during turbulent times. This year we funded PROQUEST: General Periodicals ONDISC for 98 libraries, and FIRSTSEARCH for 69 libraries.

Robert Lanning, a Library Branch Technician, received the Interagency Committee on Information Resource Management Award for End-User Excellence for his outstanding contributions to the Air Force Library Management Information System (LMIS).

It is with sadness that we announce the loss of an Air Force Librarian. Mr. Wally Burgmann, Air Weather Service Librarian, passed away on 31 October. Wally attended many Military Librarians Workshops and will be missed by his family, friends, and colleagues.

For 1994 I can assure you of one thing - that we will have many challenging opportunities.

#### **ARMY LIBRARIES REPORT**

#### Louise Nyce Director, Pentagon Library

With the dissolution of the Army Library Management Office (ALMO), the focal point for Army Library policy remains in the office of the Director of Information Systems for Command, Control, Communications, and Computers (ODISC4) but now resides in the Policy Directorate under the Director of Army Information. Cynthia Banicki is the Librarian/Staff Officer responsible for developing, coordinating, and staffing all non-career program aspects of the Library Program. In this capacity, she develops regulations, serves on HQDA inspection teams, provides the bridge between the library and the information management communities, and is the Project Manager for the Library Installation Support Module (ISM), Project Electronic Gateway for Army Libraries (EGAL), which has been moved up to increment #2 for FY 97 with fenced money through the Sustaining Base Information Systems (SBIS). EGAL is consistent with proposals in the National Information Infrastructure Act of 1993.

The revision to AR 25-1 (Information Management) is in final draft and is being staffed; an Internal Controls Checklist is being revised and appended to AR 25-1. The DODI on Management of Commercial Periodicals expired and is no longer in effect. Lack of funding is a problem in the revision of the Contemporary Military Reading List. There are, however, indications that there will be a significant reduction in further regulations.

Army Librarians are now part of a combined Career Program (CP34) for the Information Mission area, which also falls under the Director of Army Information in the Professional Development and Training Directorate. The Library Director of National Defense University, Sara Mikel, is the Deputy Functional Chief's Representative for Librarians. Policy issues and Career Program reside in two separate offices.

Two Army librarians are currently participating in the GSA Information Resource Management Project, 1000 by the Year 2000. Opportunities for a variety of other competitive developmental training opportunities geared specifically for librarians are offered again this year. The librarian intern program continues, with TRADOC receiving an allocation for 9 spaces, and AMC receiving 3 spaces with targeted assignments at completion of training. The Army Library Institute will be hosted by the National Defense University in Washington, DC from 16-20 May, with the theme: Changing Times.

The Army Library Committee (ALC) is an advisory body which offers recommendations on library matters to the ODISC4. The charter was renewed in 1993 for two years and meets at least quarterly. Sybil Bullock, RSIC, was elected ALC Chair and is also the ALC Executive Secretary. All correspondence regarding ALC business is sent through the Executive Secretary. Ken Hedman, USMA, is the liaison to about 10 Army librarians not representative by a MACOM/Agency representative on the ALC. The ALC sponsors a LISTSERV, with that host located at USMA in the Department of Mathematics. All DOS libraries are invited to join and use the LISTSERV to communicate with each other. ("How to Access" handout was provided at the workshop.)

A new agency was established - Assistant Chief of Staff for Installation Management - ACSIM. The libraries currently under the Community and Family Support Center moved from DCSPER to the ACSIM. In Army, all resources for support of libraries reside with the sponsoring organization, usually the installation commander.

Despite reports of diminished funding and staffing, new facilities are planned for Command and General Staff College at Fort Levenworth, Fort Bragg, and Schofield Barracks in Hawaii. New facilities are planned for Engineering Libraries in Walla Walla and St. Paul Districts, as well as the Cold Regions Engineering Research Laboratory. Library Systems are being upgraded or replaced (especially those with LS2000), use of libraries is increasing, and library staffs are immersed in the exploration of the Internet and the growing variety of CD-ROM products.

Louise Nyce Army Representative Military Librarian's Workshop

#### **DTIC REVIEW**

#### Carol Jacobson

Good Morning! I bring you warm regards from Mr. Molholm and all of the DTIC staff. This has been a busy and interesting year at DTIC. We were energized by the success of our Annual Users Training Conference which was held during the first week in November, and we are ready to embark on another year which we believe will be filled with training opportunities as well as new and enhanced products and services for you!

For the next few minutes, I would like to look back and highlight the changes and accomplishments which occurred at DTIC in the past year. I have divided these highlights into three parts: personnel; products and services; and training and publications.

Nineteen ninety-three was a year of change for DTIC personnelwise. Four of the seven Directors, Dick Bennertz from User Services; Dave Williford from Operations; Ellen McCauley from Information Science and Technology; and Norma Ayala from Telecommunications and ADP Systems, retired. All of these individuals were longtime DTIC employees who made substantial contributions to the success of their directorates in particular and to DTIC as a whole. They will be missed.

Nineteen ninety-three was also a year of change in terms of the products and services which we offer you. Two new services that stand out in my mind are our 800 number service and our Customer Help Desk. How many of you have used these services? Local and out-of-town customers can reach various offices within DTIC via the 800 number enhancement telephone system. By dialing 1-800-CAL-DTIC or 1-800-225-3842, you can reach DTIC's Small Business Innovation Research Program Office to order Technical Information Packets and documents; Registration Branch to request information about registering for general and on-line and network services and to request registration forms; Network Services Branch to enroll in an Internet, STINFO, DROLS, DGIS, or SearchMAESTRO class, to receive search strategy assistance or to receive help with telecommunications problems; CIM Help Desk to order CIM products or to receive referrals; Reference Services Branch to identify documents, to order documents, and to receive answers to questions concerning document orders; and Products Management Branch to obtain information on all of DTIC's products and services.

In addition, customers can receive general announcements over this system. If you are uncertain of which menu item to select, you can speak with a Customer Services Representative. Another new service is our Customer Help Desk. If you are curious about what DTIC has to offer in support of your research project or if you need guidance on how to use DTIC services, the Customer Help Desk is an excellent place to start! Tim McCleery is the Help Desk Manager. Tim can be reached on the 800 number 1-800-CAL-DTIC by selecting menu option 8, by calling 703-274-3848 or DSN: 284-3848, by faxing to 703-274-9274 or DSN: 284-9274 or by e-mailing to help@dgis.dtic.dla.mil. Tim is also available to assist walk-in customers in the Washington, DC area. Just call and make an appointment. Remember, Tim is here to serve as an ombudsman and to respond to your comments, questions, and complaints!

The year 1993 brought a number of changes and enhancements to our Department of Defense Gateway Information System (DGIS) services. First, the number of database systems which can be accessed through DGIS increased and the number of master accounts (those systems where DTIC will register you and you will receive billing through DTIC) increased as well. One of these new database systems is LegiSlate which can be used to track and identify bill status, sponsors and cosponsors of bills, and legislative history. LegiSlate also provides access to the full text of the Federal Register and the Code of Federal Regulations. The Superconductivity Information System (SIS) is another new database system that is accessible through DGIS. SIS is aimed at furthering the development and worldwide competitiveness of the U.S. superconductivity industry. It offers access to published information, work in progress, and preprints.

The last database that I would like to mention is ProBase, the Production Base Information System. ProBase is a database and assessment tool designed to provide insight into questions about the industrial base including supplier, procurement and production capability information. Another new DGIS feature is special Dialog accounts through DGIS. DTIC has received a number of individual Dialog accounts with self-destructive passwords. They are perfect for those of you who want to try allowing your customers to conduct their own searches. The accounts are fixed price (\$540) and expire after \$500 of Dialog searching services are used or by 30 Oct 95. If you are interested in purchasing one of these accounts, please contact me.

The Defense RDT&E Online System (DROLS) has seen a number of changes and enhancements this year. First, as many of you know, the Director of Information Systems Security (OASD(CI&SCM)) determined that the Low Cost Encryption Authentication Device (LEAD) did not support a wide enough range of communications to warrant final implementation with DROLS. Your assistance was very useful in the evaluation of the effectiveness of LEAD for DoD systems. Since the LEAD beta test was terminated on April 12, 1993, DTIC has received

approximately 50% of the LEAD equipment. If your organization has not returned the LEAD equipment, please do so now. If you have any questions, please contact Ms. Diane Kessler, DTIC-ZT, on 703-274-7968 or DSN: 284-7968.

Another change involved the referral records on the Technical Reports (TR) Bibliographic Database. These records describe libraries, information centers, and test facilities. In the past, these records could be retrieved but not displayed online because of the differences in their formats. Now, referral records can be displayed online. An additional new service which you may have seen while searching the TR Bibliographic Database is the inclusion of DoD directives, instructions, handbooks, manuals, and regulations. You can purchase these items individually or arrange to receive them automatically through our paper copy or microfiche Automatic Document Dissemination Programs. As an aside, I would like to remind you that you can order these and other products through electronic mail. The address is msorders@dgis.dtic.dla.mil.

The Technical Report (TR) Database on CD-ROM continues to be a well-received product. This year, we talked to our customers and asked them about their feelings concerning the coverage of the product. Our expectations were validated in two areas. First, customers want us to include as much of the older data as possible, and second, they would like to see the product remain a two-disc product. Beginning with volume 3, issue 3, which will be available in early May, the product will be a two-disc product containing citations to items entered into our collection from January 1976 through March 1994. TR Database on CD-ROM customers will be able to purchase the older data on a companion product which will handle the older citations through December 1975. We also plan to introduce the proximity searching capability with volume 3, issue 3. As a reminder, volume 3, issue 1 should be delivered by early December 1993.

During the past year, we have held several Demo Days where we demonstrated document identification on the TR Bibliographic Database, searching through DGIS, and searching on the TR Database on CD-ROM. This effort was so well received that we plan to continue it next year and expand it to include Brown Bag Lunch sessions on particular products, services, or issues of interest to our customers. The final topic that I would like to address is training and DTIC publications. I have a copy of DTIC's 1994 Training Schedule. If you would like to see it or if you would like to receive a copy of it, please see me before the end of the Workshop.

The following is a list of DTIC's new and updated publications for 1993: Users Handbook (updated), Contributor's Guide (updated), DGIS Workbook (updated), Source Header List (updated), Internet Sources (updated), STINFO Workbook (new) and 1994 Training Schedule (new).

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#### REPORT OF NAVY AND MARINE CORPS LIBRARY ACTIVITIES

#### Joan Buntzen Librarian Of The Navy

#### Special Libraries Overview

I assumed the position of Librarian of the Navy in mid-August 1993, succeeding Stan Kalkus who retired in the summer of 1992. I am located in the Naval Historical Center at the Washington Navy Yard.

For the last 23 years, I was the head of the technical libraries at one of the Navy's four warfare centers, the Naval Command, Control, and Ocean Surveillance Center, RDT&E Division, San Diego. I was replaced there by Kathy Wright.

There are two sectors in the library world of the Navy and Marine Corps: the special libraries and general libraries. The General Library Program is directed by Marge Homeyard who is located in Pensacola and reports to the Chief of Naval Education & Training. I will report general library news on Marge's behalf momentarily.

As Librarian of the Navy, I am concerned with the special libraries, that is the science, engineering, medical, academic, legal, and intelligence libraries. I report to Dr. Dean Allard, Director of Naval History, who has the responsibility to coordinate and align naval library policy throughout the Department of the Navy. Currently, there are approximately 120 special libraries. About 60% of them are science and engineering, 20% medical, 10% historical or intelligence, 5% academic, and about 3% are legal.

My major priorities are to establish my office as an active information clearinghouse; to build a database of special library directory information; to promote technology applications to both expand our traditional functional roles and also improve processes; to promote standardization in selection, choice, and use of systems and technologies; to provide leadership and coordination in base closures and consolidations; to develop cooperative and joint efforts; to look for commonalities and potential links between types of special libraries; and to seek opportunities for cooperative efforts with the Air Force and Army.

Initial progress, developments, and news in these and other areas of concern to Navy and Marine Corps special libraries include the following:

- The traditional quarterly meetings of the Librarian of the Navy and Marine Corps Library Forum which will meet more frequently and in various locations. Sessions will include both a forum for discussion and topical presentations, as well as a working portion. Two Forums have taken place this year, one in September and one on Monday night, November 15th.
- A newsletter, titled <u>News & Notes From the Librarian of the Navy</u>, has been established and two issues have been distributed since August.
- A list of special libraries and head librarians was compiled and distributed in September.
- A Library Information Request was distributed to each special library in August. The Request called for data on individual library resources, functions, personnel, automation, budget, and other areas. Responses are formatted for the <u>Directory of Navy and Marine Corps Special Libraries</u> and eventually for a database. Directory pages for 10 libraries were distributed in October.
- A draft Secretary of the Navy instruction on policy for closure, transfer and realignment of libraries has been written and is in the initial stage of official review. An action checklist to complement the instruction is being written.
- The concept of a new Navy instruction on resource sharing has been approved by Dr. Allard. The instruction will focus on the scope and modern capabilities of sharing all types of library and information resources, accessibility of collections, and promoting standardization in the acquisition, storage, and retrieval of materials. Input by all librarians has been requested and will be the topic of future Forums.
- New options for a Navy union list of serials are being reviewed, including a
  joint effort with the Army TRALINET Center in the use of their TULIP
  program.

News in the area of closures includes the closing of the medical libraries in Long Beach and Philadelphia. The technical libraries at the Mare Island and Charleston Shipyards will be closed, but firm dates are not yet known. The technical library at the Office, Chief of Naval Research in Arlington will be closed shortly. The library at the Naval Electronic Systems Engineering Center, San Diego, is slated to be contracted out; the contractor has not yet been announced. There is considerable activity in realignments and consolidations, but it is too extensive to detail here.

Our special libraries have been very active in the automation area. Several have selected new integrated systems as part of upgrade efforts. Many are in the phase of reviewing systems capabilities.

Also on the good news front, several of our libraries have gained additions and renovations to their buildings and have new buildings on the drawing board. We also have a new library at the Naval Undersea Museum in Keyport, Washington, which is not only building new collections in the history of Navy undersea technology but is also installing an automated system.

#### General Libraries Overview

The Navy and Marine Corps general and reading collections, afloat and ashore, have had a very upbeat year.

The central program has been strengthened by adding fleet and shore coordinator positions at the Naval Education and Training Program Management Support Activity, Pensacola. Additionally, Fleet Recreation Coordinators located worldwide are now part of the program's waterfront network to increase library visibility and advocacy aboard ship. The two new central positions are under recruitment at GS-1410-11 level and are open DOD-wide.

To assist Navy shore libraries in developing advocacy groups, each library is now a member of Friends of Libraries, USA. Information on establishing a friends group, including sample bylaws, is available for local command use.

The funding picture has shown improvement in a number of areas: last year, each Marine Corps library received a \$3K allocation for CD-ROM products. This support is expected to continue in '94. On the Navy side, funds for central selection and procurement of library materials have increased by 125% in FY94 with additional increases still holding firm in the outyear budgets. Shortfalls in local command shore library support are currently being identified in a Baseline Assessment Memorandum. Gathered data will be submitted to Comptroller of the Navy as a consolidated requirement for POM96. In FY93 the central program secured \$400K in special funding for materials to assist personnel transitioning out of the Department of the Navy. Additional funds are programmed for this year and FY95. In a major Department of Navy policy change, Navy libraries will also be able to use non-appropriated funds to supplement their OM&N budgets.

On the fleet side of the house, Learning Resource Centers, which consolidates materials for onboard military training and afloat college courses with traditional library support in a common space equipped with computers and multiple CD-ROM products, have been extremely successful. The central program anticipates funding Centers aboard an additional 5 to 10 ships this year.

In response to rightsizing, qualitative and quantitative standards for Navy ship and shore collections, facilities, equipment, and services have been revised from top to bottom with emphasis on improved staffing and full use of automation and other technologies to expand access to and the sharing of information.

The number of libraries and reading collections supported by the central program has shrunk to 850. An additional loss of 38 ships is anticipated in '94 and 12 Navy and 2 Marine Corps libraries will close in the next few years as the result of BRAC 91 and 93. The ship draw down will be partially balanced by 16 new libraries and reading rooms aboard ships commissioning in FY94. Two new shore libraries are also on the drawing board.

#### Conclusion

Navy and Marine Corps librarians continue to find formidable challenges in the post cold war rightsizing and reinventing government era. Although it is difficult to strategize for the future while struggling for survival with limited resources and tools, many of us recognize that we must at the same time look not just for new ways to do business, but also for new business or functional opportunities and then exploit them for OUR agenda of more information resources better delivered.

#### CANADIAN DEPARTMENT OF DEFENCE

Gretchen Cheung Chair, Military Librarians Workshop

**VUGRAPHS ONLY** 

# MILITARY LIBRARIANS WORKSHOP 18 NOVEMBER 1993

#### LIBRARIES IN THE CANADIAN DEPARTMENT OF NATIONAL DEFENCE

NDHQ

COMMANDS

EDUCATIONAL INSTITUTIONS

COLLEGES

SCHOOLS

RESEARCH AND DEVELOPMENT

DSIS

6 RESEARCH ESTABLISHMENTS

## MILITARY LIBRARIANS WORKSHOP 18 NOVEMBER 1993

#### INFORMATION UNITS IN THE RESEARCH AND DEVELOPMENT BRANCH

DSIS

Scientific and Technical Reports
Ottawa, Ontario

DEFENCE RESEARCH ESTABLISHMENT ATLANTIC
Dartmouth, Nova Scotia

DEFENCE RESEARCH ESTABLISHMENT VALCARTIER
Courcelette, Quebec

DEFENCE RESEARCH ESTABLISHMENT OTTAWA
Ottawa, Ontario

DEFENCE CIVIL INSTITUTE ENVIRONMENTAL MEDECINE
Downsview, Ontario

DEFENCE RESEARCH ESTABLISHMENT SUFFIELD
Ralston, Alberta

DEFENCE RESEARCH ESTABLISHMENT PACIFIC
Victoria, British Columbia

# Director Scientific Information Services OSTENSIO PERSCHENTIAL ESEARCH AND DEVELOPMENT DPGS/DSEG 7

Acquire

Manage

- Disseminate

support defence research and development Scientific and technical information to

DPGS/DSEG

93-1552

Director Scientific Information Services Document provision Literature searching Current awareness

# Director Scientific Information Services



United Kingdom United States information exchange agreements with Sweden · Morway Foreign document orders Fed. Rep. of Germany The Netherlands New Zealand Australia

# Collection

1,000,000 documents 1947 to present CANDID (In-house database) 1969 to present Includes classified / limited material

22296/02

# Director Scientific Information Services



Unique Features

CANDID - Canada's defence database 1200+ current awareness profiles Canadian access to DROLS

NATO J- AGARD National Distribution Centre J- DRG Document Centre

Canadian Defence Information Database Director Scientific Information Services 1,000,000, documents 1969 to present 1947 - 1968 CANDID DPGS/DSEG 7

# Director Scientific Information Services Schools, Colleges (12.7%) Bases, Commands, PMO (15.8%) SDI service (1230 profiles) nternational, Government, University (3.8%) Other DIND (13.5%) Defence Contractors (2.4%) **DSIS users 1993**

# MILITARY LIBRARIANS WORKSHOP 18 NOVEMBER 1993

### DOWNSIZING

- 1992 25% REDUCTION
  STAFF REDUCED FROM 34 TO 25
- 1994 AND 1995 ONE MORE POSITION LOST EACH YEAR
- REORGANIZATION
- GREATER RELIANCE ON AUTOMATION
- INTEGRITY OF COLLECTION
- QUALITY OF DATABASE
- QUALITY OF SERVICE ?
- FUTURE OF DSIS STUDY UNDERWAY

# MILITARY LIBRARIANS WORKSHOP 18 NOVEMBER 1993

### FUTURE PLANS

- IMAGING SYSTEM FOR DOCUMENT STORAGE AND RETRIEVAL
- LOCAL AREA NETWORK UPGRADE

  AND CONNECTION TO INTERNET
- ELECTRONIC DELIVERY OF UNCLASSIFIED SERVICES
- CD-ROM PRODUCTS
- INCREASED DIALOG WITH USERS
- IMPROVED MARKETING

### ALL — ARMY LIBRARY LISTSERV

### Michael Morrison In Conjunction With Networking Developmental Assignment Pentagon Library

Any military library with a PC, a modem, and an E-Mail address can now receive free instant electronic distribution of professional news and information of interest to the military librarian from ALL - the new Army Library List Server (LISTSERV). Current subscribers are not only Army librarians, but also from the Navy, Air Force, Geological Survey, and Defense Technological Information Center. This is an opportunity to keep everyone informed of current issues that affect us and to share our concerns and solutions.

A few samples of the types of items found on **ALL** are attached. This Fact Sheet explains **ALL** and tells how to participate.

### What Is A LISTSERV?

A LISTSERV is a computer service that provides systematic distribution of posted messages to a list of subscribed participants. Thousands of LISTSERVs, also called discussion groups, now flourish in all fields of interest; there are already over 100 on libraries alone. The Army Library LISTSERV was inaugurated in the summer of 1993.

### What Does It Do?

The primary purpose of the LISTSERV is to provide an informal avenue for the professional exchange of information of interest to all military librarians. It is intended to cover a wide spectrum of topics such as operational procedures, vacancy announcements, personnel news, excess library materials, professional meeting announcements, etc.

### Is This The Same As A Computer Bulletin Board?

A LISTSERV differs from a Bulletin Board Service (BBS) in that each item posted to a LISTSERV is automatically delivered to every subscriber, while on a BBS the participant browses a list or menu and reads only the selected files. An example of a BBS is the ALIX service of the Library of Congress.

### Who Edits The Contents?

The LISTSERV is not moderated. This means that any information posted to it will be relayed automatically to the entire list membership. Although intended for Army librarians, the LISTSERV is available to anyone with Internet access (e.g., private corporations, universities, military commanders, all government agencies, members of Congress, the White House, etc.). Each subscriber is expected to keep material on a professional level. Obviously, the appearance of information on the LISTSERV does not make it official policy.

### What Organization Sponsors Our Army Library LISTSERV (ALL)?

The LISTSERV was established by the Army Library Committee. The host computer of the LISTSERV is located in the Department of Mathematical Sciences at the United States Military Academy at West Point, New York.

### How Do I Subscribe?

To subscribe to the Army Library LISTSERV, send an E-mail message to:

### LISTSERV@EULER.MATH.USMA.EDU

Leave the subject line blank. In the first line of the text, enter only the command:

### UNSUBSCRIBE ARMY-LIB

(Please note that when you unsubscribe, you do not include your name after the command).

You can always subscribe again in the future, of course.

### How Do I Submit An Item For Distribution?

To post a message on the LISTSERV, send it to:

### ARMY-LIB@EULER.MATH.USMA.EDU

Enter the appropriate subject in the subject line and your message in the text area. This will be relayed to the entire list, so be sure that the contents are of group interest.

### What Should I Do If I Get An Error Message When I Try To Subscribe?

You may need to request your systems administrator to add the LISTSERV address to your address tables in order for you to subscribe. If so, the following information applies:

Domain Name Address: EULER.MATH.USMA.EDU Equivalent IP Numeric Address: 129.29.79.198

For additional information at the U.S. Military Academy Library, please contact Mr. Larry Tietze, u19106@trotter.usma.edu, DSN 688-2659/Commercial (914) 938-2659; or Ms. Rona Steindler, ur7809@trotter.usma.edu, DSN 688-3185.

### Who Do I Call If I Need Help?

It is usually a good idea to talk to someone locally or in your technical channels e.g., your systems administrator who has worked with a LISTSERV to answer routine questions. If you can't get good answers that way, the LISTSERV owner is LTC John Robertson, Room AJ4640, Department of Mathematics and Sciences, USMA, West Point, NY 10996-1786.

E-mail: AJ4640@euler.math.usma.edu

DSN: 688-2453; Commercial: (914)938-2453

FAX: (914)938-2409

### How Can Subscribers Avoid Saturating The System With Unwanted Messages?

One very important distinction that must be made when sending items to the LISTSERV concerns the portion of the address before the "@" symbol. Type "ARMY-LIB" in this area for messages intended for all subscribers, but type "LISTSERV" for such things as subscription requests. It is also considered good NETiquette to include your own E-mail address in the text of any document you post for distribution. That way readers can contact you directly if they have questions or comments that are not likely to be of interest to the entire subscriber list. By following these suggestions, you can help minimize the irrelevant, repetitive, and redundant messages that plague some LISTSERVs.

### Why Do I Need It?

You can run, but you can't avoid E-mail. It is - for some - the only way to communicate and to share even now. It is true that not all the messages you receive are appropriate. But enough of them are, and this could be your main source of information about what is happening in military libraries.

Several samples of things pulled off from **ALL** are attached to give you an idea of what you are missing. And it could be a way to get ideas from others on problems you can't solve. Why not give it a try. It's free and it can't hurt.

HEIRUNGFENTALAN HUDADSS ARMY HIL, LINTHICUSSTATAGON-NODADSS ARMY.HIL, HMONELLBALEXANDRIA-EMN1, ARMY.HIL, linda s deanSpentagon-ldms2 army mil, wynelle b leuisSpentagon-ldms2 army.mil, anthony m.vallettaBpentagon (dms2.army.mil,

Subject CP J4 Meeting

I have instituted meetings with our PERSCOM CP34 staff and others on a 4.6 week basis. Today's meeting was the first and very productive. Highlights are:

- 1. Army FY94 funds for ACTEDS will be approx. 82M dollars. Most of that money will go for the Army's intern programs and its lender development programs (Army Management Staff College and the Leavenworth LEAD programs). 13M dollars will be for competitive professional development, and we in CP34 can expect approx. 700K - 800K for our people.
- 2. As we had requested, PERSCOM presented a full laydown of our (CP)4) interns since 1990. Some stats:
- a. Because of downsizing and hiring freezes, our intern allocations have gone from a high of 487 (1990) to today's (1994) of 123. This parallels the drop in interns throughout the Army.

  b. Intern intake between 1990 and 1993 37% are minorities (Army stats are all DA interns, 27%; all career program people, 19%) and 53% are women (Army stats are: all DA interns, 41%; all career program people, 40%). Note that the two stats (minorities and women) are not exclusive. Also, 64% have BA degrees or higher compared with 97% to the DA statistic. This will be a topic of discussion at our IMA career advisory council this fall.
- 3. PERSCOM presented a milestone schedule for the integrated ACCES (referrat system). Morkshops will start this fall to begin to get the data from our various career tracks, do some pilot testing, codify policies, do format staffing, get training etc. I stated loud and clear that I want the system to be streamlined, user friendly, easy and quick to fill out INEVER AGAIN 100 from SKAPS TO FILL OUT::). I will need all of your help to assure that this occurs. Latest ECD for this system to begin referrals is Sep 95.
- 4. Earlier, PERSCOM had indicated that they might raise the central referral levels of some of our career tracks because of personnel cuts at PERSCOM. Looks like the personnel cuts will be in the manageable range and, thus, the current referral levels stay as they are.

Again, a good session, lots of discussions. In addition to my staff and PERSCOM, the Deputy FCRs were invited and most attended.

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From: "jknight" (jknight@rma-emhf.army.mil)-
To: Multiple recipients of list carmy-libeculer.math.USMA.EDU>
Subject: Ad Notes: Bulletin Roard - GPO Access
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X-Listserver Version: 6 0 . UNIX ListServer by Anastasios Kotsikonas

X-Comment: The Army Library Mailing List

Received: by commail from purma-embl.army.mil >From (EPSUVM. PSU. EDU: UMMET-govdoc-18PSUVM. PSU. EDU X-Envelope-From: (PPSUVM. PSU EDU: owner-govdoc-1975UVM. PSU. EDU Received: by parma-enhl, army, mit (5.65/DEC-Ultrix/4.3) td AA19590; Thu, 5 Aug 1993 89:18:26 -0680 Message Id: <9308051510.AA195908pmcma emhl.army.mil> RECEIVED: Eron PSUVM. PSU. EDU by PSUVM. PSU. EDU (IBM VM SMTP V2R2) with BSMTP 1d 8345; Thu, 05 Aug 93 11:71:45 EDT RECEIVED: From PSUVM. PSU EDU INJE origin LISTSERVEPSUVM) by PSUVM. PSU. EDU (LNo.L VI. 10/1.75) with BSMTP id 1671; Thu, 5 Aug 1993 11:11:27 -0400 Date: Thu, 5 Aug 1993 10:04:46 CDT Reply-To: Discussion of Government Document Issues (GOVDOC-LEPSUVM.PSU.EDU) Sender: Discussion of Government Document Isaues (GOVDOC-LEPSUVM.PSU.EDU) From: TULISéguvax.acc.georgilim.edu

S. plect: Ad Notes: Bulletin Board - GPO Access To: Multiple recipients of list GOVDOC-L (GOVDOC-LEPSUVM. PSU. EDB)

Following is from Admin Mutes, vol. 14, no. 17, 8/15/93.

### BULLETIN BOARD INVITES COMMENTS ON GRO ACCESS

A new free Special Interest Group (SIG), GPOACCES, has been added to the Federal Bulletin Board (202-512-1397). This SIG contains the text of Senate bill 5. 564, the "Government Printing Office Electronic Information Access Enhancement Act of 1993, signed into law by President Clinton on June 8, 1993 (Public Law 103-401.

The SIG also contains the text of the accompanying House and Senate reports and the President's statement on the bill. It will also include relevant Fact Sheets prepared by GPO's Office of Electronic Information Dissemination Services (OEIDS). Depository librarians and the general public may address comments and questions to OEIDS by sending an E-mail message to GPOACCES.

Ad Notes: Bulletin Board - GPO Access

SAMPLE #

SAMPLE # 2

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### RELATIONSHIPS BETWEEN LIBRARIES & NEW INFORMATION ENTITIES

Kurt Molholm, DTIC Chair

Members Norman Lee, NAIC/DXI - VUGRAPHS ONLY

Keith M<sup>c</sup>Connelly, DISA/CIM
Pat M<sup>c</sup>Williams, STINFO-AFMC - VUGRAPHS ONLY

### **MIL INTEL CHANGES & OSIS**

## MILITARY INTELLIGENCE CHANGES AND THE OPEN SOURCE INFORMATION SYSTEM

MR NORM LEE NAIC/DXI OSSA PROGRAM MANAGER

### **OVERVIEW**

- CHANGES IN MILITARY INTELLIGENCE
- OPEN SOURCE ARCHITECTURE

# CHANGES IN INTELLIGENCE

- NAVY
- ARMY
- AIR FORCE
- DIA

# DEFINITION -- OPEN SOURCE INFORMATION

- PUBLICLY AVAILABLE INFO IN PRINT OR ELECTRONIC FORM ... TRANSMITTED THRU RADIO, TV, NEWSPAPERS OR DISTRIBUTED BY COMMERCIAL DATABASES, ELECTRONIC MAIL NETWORKS OR PORTABLE ELECTRONIC MEDIA
- BROADLY DISTRIBUTED MASS MEDIA SELECTED AUDIENCES – GRAY LITERATURE
- INVOLVES NO INFORMATION CLASSIFIED AT ITS ORIGIN
- SUBJECT TO PROPRIETARY CONSTRAINTS

### **MIL INTEL CHANGES & OSIS**

### OPEN SOURCE VISION

- OPEN SOURCE INFO SOURCE OF FIRST RESORT
- ACCESSIBLE FROM USER ENVIRONMENT
- MANIPULATABLE IN USER ALL-SOURCE ENVIRONMENT
- IC VIEWED AS A VIRTUAL ENTITY INDEPENDENT OF LOCATION
- END -TO-END CONNECTIVITY
- "SMART NETWORK" DOMAIN KNOWLEDGE

## OPEN SOURCE ARCHITECTURE

- CONNECTIVITY
- FUNCTIONALITY (OSSA)

### CONNECTIVITY

- UNCLASSIFIED -- INTERNET
- CLASSIFIED -- DSNET/ JWICS

### OSSA MAIN FEATURES

- FIND INFORMATION
- GET INFORMATION
- TRANSLATE
- MANIPULATE
- SHARE

### **MIL INTEL CHANGES & OSIS**

# OSSA -- ADDITIONAL FEATURES

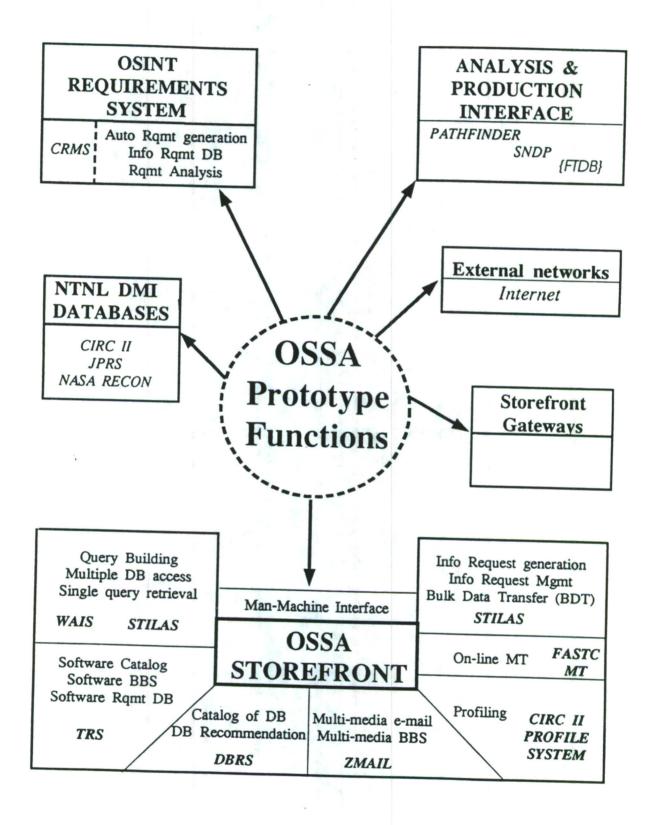
- REQUIREMENTS SYSTEM
- HELP DESK

### **OSSA STATUS**

- PROTOTYPE ON CONTRACT
- ENHANCED OSSA UNDER STUDY

### **CONCLUSION**

- IC DEVELOPMENT ACTIVE
- TOOLS PROGRAM UNDERWAY
- CONNECTIVITY ACTIONS



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# CORPORATE INFORMATION MANAGEMENT AND BUSINESS PROCESS RE-ENGINEERING

Keith S. McConnelly Leader, Process Innovation Support Group Center for FPI Expertise November 18, 1993

### Slide 1, CIM for Military Librarians

In this session I would like to introduce you to Defense Information Management and the Business Process Re-engineering program. I don't have to tell you that Librarians are one of the biggest users of information and information technology. You already fully understand that information is an asset that needs to be protected and managed as such.

### Slide 2, Outline

I will introduce you to the principles of Corporate Information Management as they are used in the Department of Defense, and how it is being implemented through Business Process Re-engineering (formerly called Functional Process Improvement). Then we will discuss the tools available to support BPR and finally the Center for FPI Expertise and it's support for your BPR projects.

### Slide 3, CIM Principles

These principles were first generated by the Executive Level Group that originated Corporate Information Management about three years ago. These were codified in DoD Directive 8000.1 early this year. I don't have to tell you that librarians are tremendous users of information and information technology. These principles apply directly to your working environment. The two elements that, I think, are most important to you, Military Technical Librarians, are the second, Data Standards, and the third, Communications Infrastructure. As information managers, it is essential that Librarians develop and maintain standard data structures. Because of the nature of your work you need to become involved in the establishment and maintenance of the Communications Infrastructure. At the end of my presentation I will let you know who to contact to work with in each of these areas.

### Slide 4, DoD FPI (BPR) Methodology

This slide shows the six phases of the DoD Business Process Reengineering (BPR).

In the first phase it is essential to establish top level leaders' support for accomplishing BPR; also validate the organizations mission and update and revise the strategic plan that will guide your organization into the future.

Once we are committed to doing BPR in our organization and we have established the teams that will lead these efforts, it is time to get started. The first efforts are to document what we are doing today. What are the processes, what are the inputs and outputs of those processes. What constraints are there in the processes, and what resources, equipment, and people do we need to carry out our processes. We need the baseline as a basis of comparison for our improvements. In our baseline we also need to document the information being used and the infrastructure supporting them. Many times improvement opportunities are identified while we establish the baseline. These are usually low or not cost alternatives - eliminating non-value-added activities. We will use this baseline to compare our improvement alternatives.

The next step is a concerted effort to find new ways to accomplish our mission. A variety of techniques will be used to improve our processes. These include techniques such as brainstorming - just getting the right people together in the correct environment can result in savings and improvements. You may want to compare with others that do similar activities, this is called benchmarking, or learn how the best of the best accomplish similar activities. The viable improvement alternatives that still accomplish our mission are documented. We document the new processes, information requirements, and cost of operation.

Once we have identified and documented our improvement opportunities we need to put together a business case to sell the improvements. In DoD we use the Functional Economic Analysis of FEA as our business case. We will include the management plan for implementing the alternatives.

Then we actually sell our improvement program to the approval officials - those that will approve and fund our improvement program.

The final step is to actually implement our improvement opportunities. This is where we actually see if we have top leadership support of our effort. This is where we invest in the new processes, organization, policy, and equipment and systems that support our new business processes.

These next six slides show additional details on each of these steps. The slides were not shown due to limited time but are provided for your information.

Slide 5, Methodology, Establish Project Framework (Not shown)

Slide 6, Methodology, Document and Analyze Current Baseline (Not Shown)

Slide 7, Methodology, Perform Business Improvement Analysis (Not Shown)

Slide 8, Methodology, Develop Management Plan and FEA (Not Shown)

Slide 9, Methodology, Review and Approve Program (Not Shown)

Slide 10, Methodology, Execute FPI (BPR) Program Decisions (Not Shown)

Slide 11, Featured Services; Center for FPI Expertise

The Center for FPI Expertise provides a one-stop-shop for doing business process re-engineering. We generally provide three types of services. We have facilities where we actually conduct BPR workshops. These have included improvement workshops, strategic planning, policy development, and fact gathering sessions that are leading to improved business processes. We demonstrate the automated tools and techniques that are used to do BPR. These tools are also available through our loaner library for limited periods of time. We can do limited training in the use of these tools. In the third area, we have contractual vehicles in place to provide support for doing functional process improvement.

### Slide 12, Tools to Support Process Improvement

The center has tools to support all aspects of business process reengineering. There are tools to support activity and data modeling. IDEF< the Integrated DEFinition language is the technique that DoD has standardized for activity and data modeling. We support unit cost through activity based costing or ABC. The FEA model will help you document your functional economic analysis. Simulation tools can be used to proof improvement alternative. We provide access to databases of best business practices that support benchmarking efforts. Finally there is a repository of IDEF models to support the reuse of models.

### Slide 13, Center for FPI Expertise

Here is the layout of the Center for FPI Expertise. The Collaborative Work Environment is where we carry out BPR workshops. The Process Innovation Support Group has the automated tools to support your improvement efforts. We will look at each in more detail on the next two slides.

### Slide 14, Process Innovations Support Group

Here you can see the layout of the Process Innovation Support Group and the tools that are available for review and use. We also have room for demonstrations, briefing, and training.

### Slide 15, Collaborative Work Environment

This is the floor plan we've designed to support BPR efforts. The electronic meeting system allows all information to be captured for future use and analysis. But this is done with complete anonymity. Each individual can enter his or her input without worrying that somebody will think it is a dumb idea because of who said it.

### Slide 16, Summary

Business process re-engineering is being implemented across the Department of Defense. Projects have been initiated in all major functional areas. These projects are focusing on functions and business processes with technology being the enabler. BPR is providing the Department of Defense the tools to "reinvent government."

### Slide 17, For More Information

Center for Functional Process Improvement Expertise Sequoia Plaza 2100 Washington Blvd. Arlington, VA 22209 (703)892-4260

### Slide 18, DISA Support for Military Technical Librarians

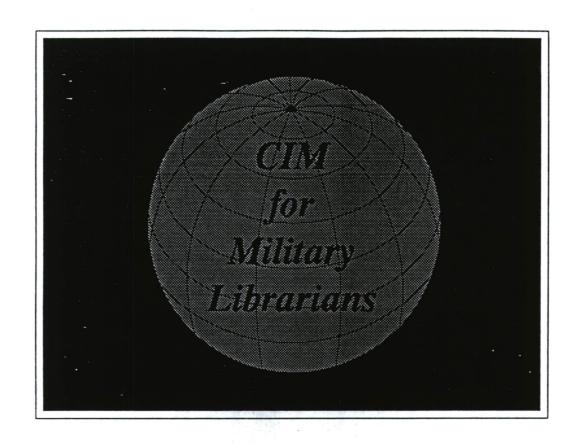
As I said earlier, there are several areas that the Military Technical Librarians need to get involved in. These are data administration and telecommunications. The people you need to contact are Mary Jo Materia for Data Administration, and Tony Montemarano for telecommunications.

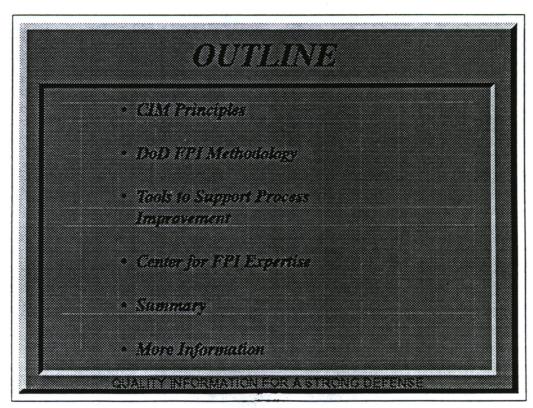
### **Data Administration**

Mary Jo Materia DISA/JIEO/CIM Data Administration PMO (703)285-5377

Telecommunications
Tony Montemarano
DISA/UTDD/Program Development Division
(703)385-5020

Mr. Montemarano is involved with the replacement for DDN. You need to work with him to make sure your needs are met and to determine what alternatives there are to meet your needs.







Develop Process Models that Document New and Existing Business Methods.

Develop Data Standards with Emphasis on Data Modeling.

Develop and Implement a Set of Cost Effective, Common Information Systems Based Upon Process Models and Data Standards.

Develop and Implement a Communications and Computing Infrastructure Based Upon the Principles of Open Systems Architecture and Systems Transparency.

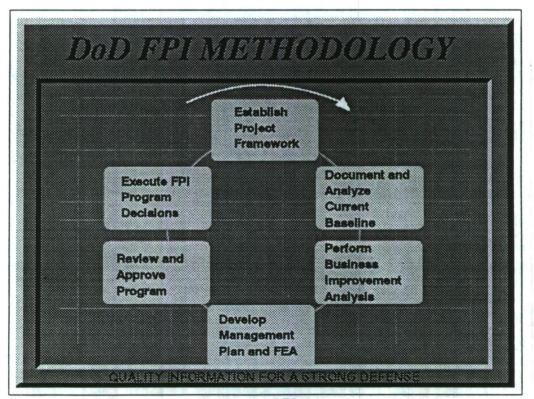
Manage Expenditures for Information, Regardless of the Technology Involved.

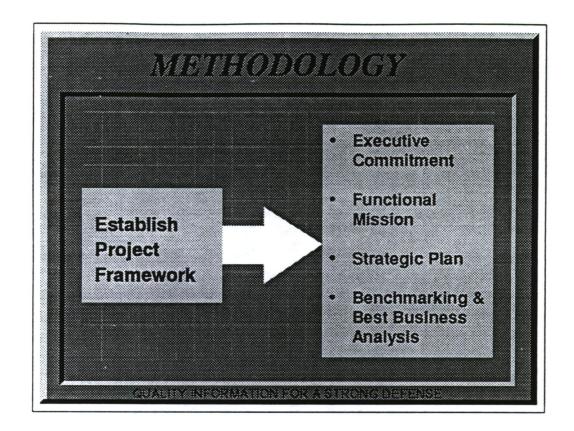
Institute a Life-Cycle Management Methodology that Addresses Process Models, Data Models, Updated System Development and Acquisition Methodologies, and Educate the User and Technical Communities on its use.

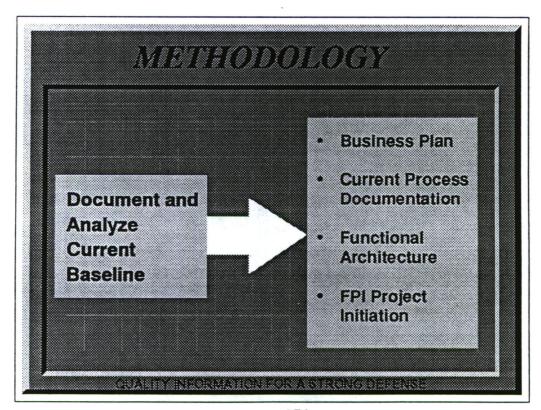
Establish Measures of Information Management Effectiveness and Efficiency.

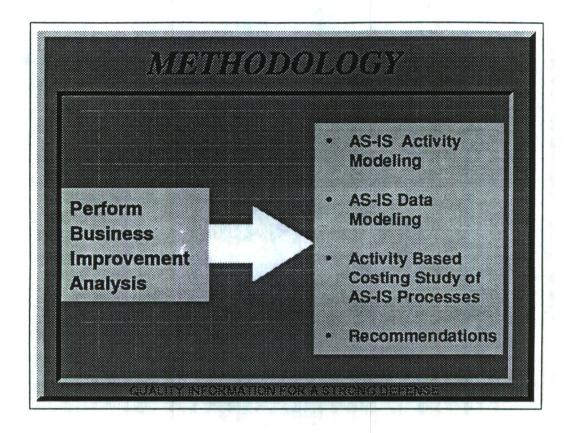
Educate Department Personnel in the Concepts of Corporate Information Management and the Plans to Apply It.

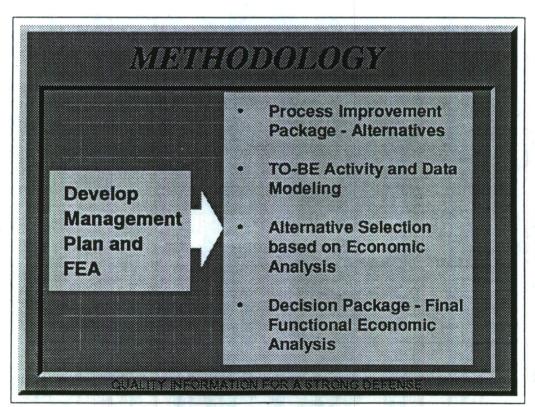
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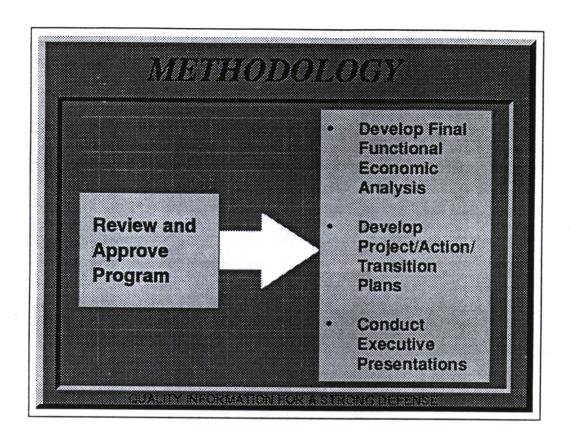


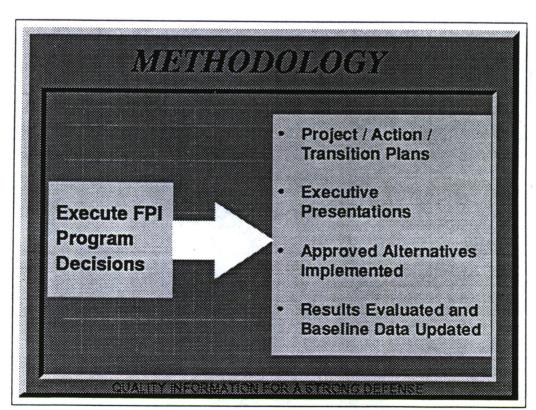












# FEATURED SERVICES Contor for FPT Famoriase

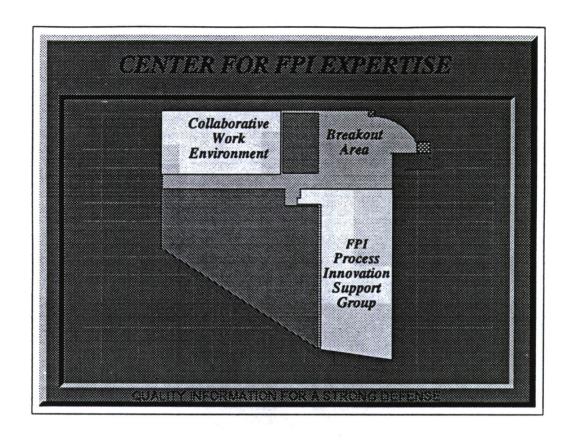
- State-of-the-art FPI Groupware Center.
- Benchmarking and best business practices
- FPI measurement program
- \* FPI Commercial Off The Shelf (COTS) tools
- FPI inclinical support to functional users and assist them in conducting business reengineering.

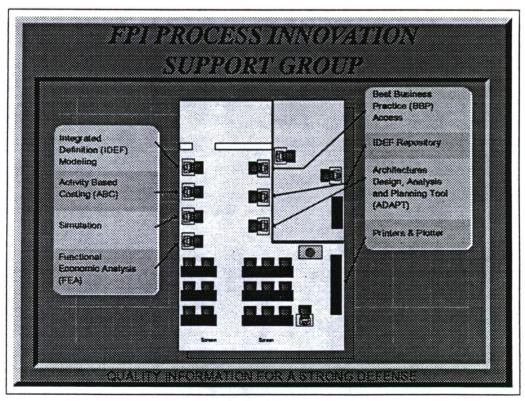
GUALITY INFORMATION FOR A STRONG DEFENSE

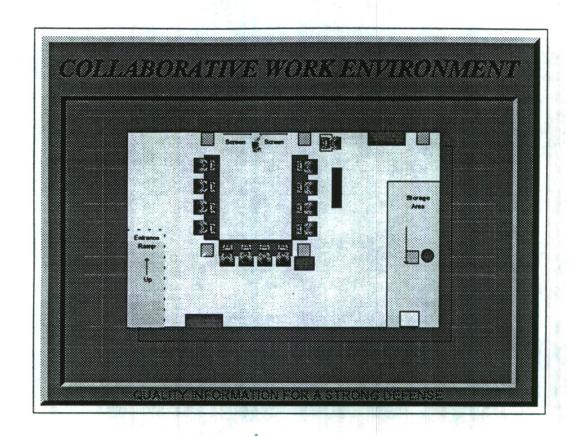
# TOOLS TO SUPPORT PROCESS IMPROVEMENT

- Groupware Center Tools
- IDEF9 and IDEF IX Modeling Tools
- Unit Cost Tool Sets
- Functional Economic Analysis Tools
- Simulation Tools
- Benchmarking & Best Business Practices
- Repository Tools

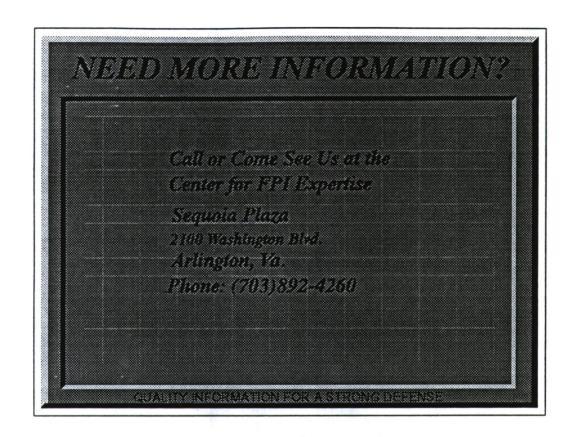
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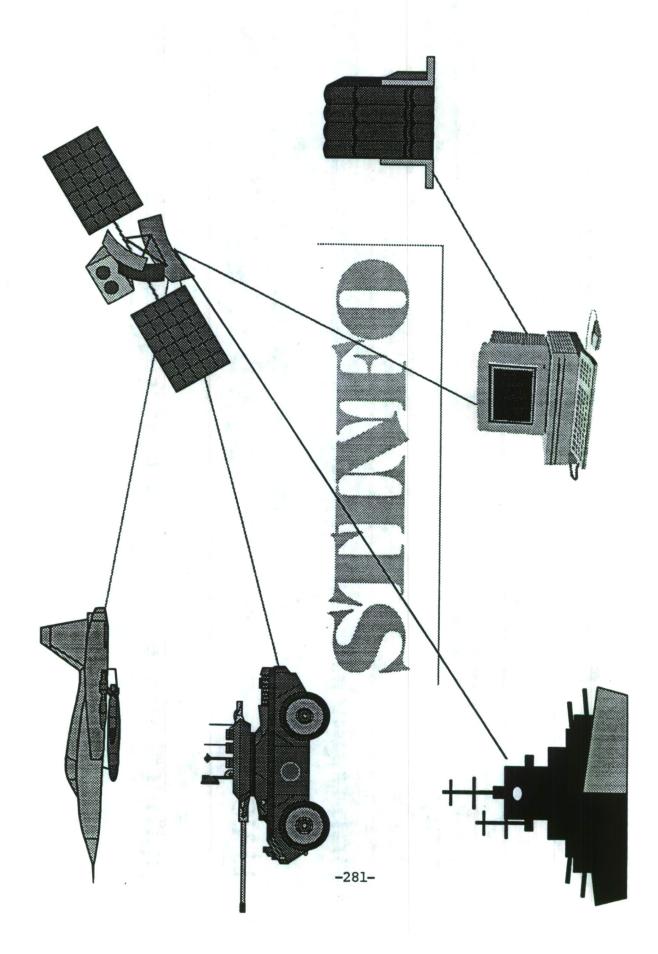






# FPI to be implemented across all DaD fluictions FPI Focuses on function and organization FPI provides the looks to "reinvent government"







# **DEFINITION**

DOD MISSIONS AND ROLES

**LIAISON and COORDINATION ACTIVITIES** 

**SERVICE POCs AND REGULATIONS** 

# RELATIONSHIPS BETWEEN LIBRARIES AND DOD STINFO

1993

Military Librarians Workshop

Pat McWilliams AF Material Command/CIXR 18 Nov. 1993

## STIP-STINFO DEFINITION

...IS INFORMATION RELATING TO RESEARCH, EVALUATION, PRODUCTION, OPERATION, DEVELOPMENT, ENGINEERING, TESTING, PRODUCTS, SERVICES AND EQUIPMENT **USE AND MAINTENANCE OF MILITARY FOR MILITARY SYSTEMS**  ...INCLUDES ALL PRODUCTION, ENGINEERING AND LOGISTICS INFORMATION

# DOD SCIENTIFIC AND TECHNICAL INFORMATION POLICY OFFICE

# MISSIONS AND ROLES

## MISSIONS

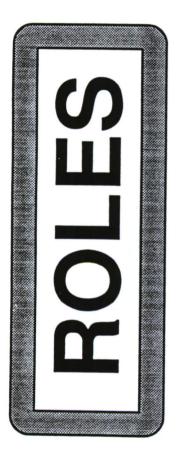
SCIENTIFIC AND TECHNICAL INFORMATION POLICIES, PRINCIPLES AND PROCEDURES RELATED TO ALL ASPECTS OF THE DOD **ASSESS. DEVELOPS AND RECOMMENDS PROGRAM (STIP)** 

**CONSISTENT WITH USD(A) GOALS AND** RECOMMENDS CHANGES TO KEEP STIP **OBJECTIVES** 

FACILITATES OSD/OUSD(A) OVERSIGHT AND REVIEW OF THE STIP

PERFORMS PROGRAM ANALYSIS TO FACILITATE PPBS INPUTS

ASSESS IAC MANAGEMENT, SCOPE, FUNCTIONS AND NECESSITY



### **TECHNICAL INFORMATION IS AVAILABLE DEVELOPS GUIDANCE TO ENSURE THAT THROUGH DOD RELATED TECHNICAL LIBRARIES**

### **TECHNOLOGY TRANSFER PROGRAMS** PROVIDES POLICY GUIDANCE FOR DOD

## SHION OF THE PROPERTY OF THE P

**LIAISON WITH DOD, FEDERAL, NATIONAL** PROMOTES EXCHANGE OF STI THROUGH AND INTERNATIONAL ORGANIZATIONS

CLASSIFIED AND OTHERWISE RESTRICTED POLICIES AND PRACTICES CONCERNING COORDINATES WITH OSD SECURITY ON INFORMATION

### **WORKS WITH THE FOLLOWING** STINFO-STIP PROGRAM **OFFICES & PROGRAMS**

UNIT COMMAND STRUCTURE

NTIS

JA-PATENT OFFICE

SBIR

**EDITING** 

GIDEP

TECHNICAL LIBRARIES

PCP

**CONTRACTING OFFICE** 

INTELL OFFICE

DTIC

SECURITY

**ENGINEERS & SCIENTISTS** FOREIGN DISCLOSURE TILO-NARDIC-AFIFIO PA-POA ORTA **PMOs** IR&D DWO FOIA IACs

# DOD STIP POLICY DOCUMENTS

DODD 3200.12

DOD SCIENTIFIC AND TECHNICAL INFORMATION PROGRAM

**DODI 5200.21** 

DISSEMINATION OF DOD TECHNICAL INFORMATION

**DODD 5230.24** 

DISTRIBUTION STATEMENTS ON TECHNICAL DOCUMENTS

**DODD 5230.25** 

WITHHOLDING OF UNCLASSIFIED TECHNICAL DATA FROM PUBLIC DISCLOSURE

# **MORE POLICY DOCUMENTS**

**DODI 5230.27** 

PRESENTATION OF DOD-RELATED SCIENTIFIC AND **TECHNICAL PAPERS AT MEETINGS** 

DODD 3200.12-R-1

RESEARCH AND TECHNOLOGY WORK UNIT INFORMATION SYSTEM REGULATION

DODD 3200.12-R-2

**CENTERS FOR ANALYSIS FOR SCIENTIFIC AND TECHNICAL INFORMATION REGULATION** 

DODD 3200.12-R-3

DOMESTIC TECHNOLOGY TRANSFER PROGRAM REGULATION

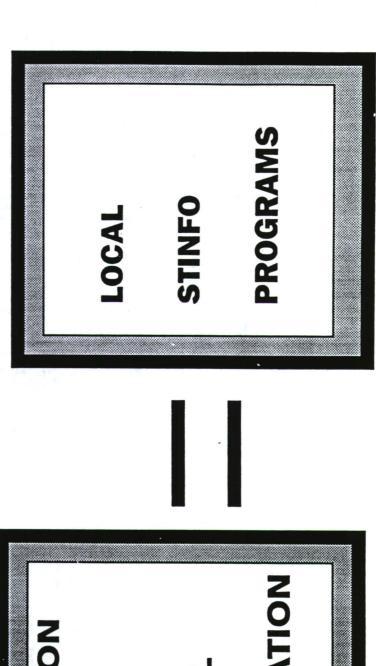
### **DFAR 237.206**

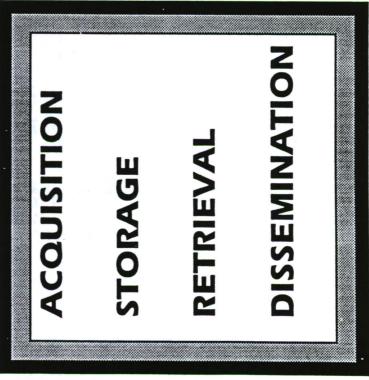
## PART 237 SERVICE CONTRACTING

237.206 REQUESTING ACTIVITY RESPONSIBILITIES

QUERIED, THAT EVIDENCE OF THOSE QUERIES ARE ON FILE, AND NO EXISTING SCIENTIFIC OR TECHNICAL DEFENSE TECHNICAL INFORMATION CENTER (DTIC) RESPONSIBLE FOR THE STUDY STATING THAT THE (b) ON ACQUISITIONS FOR STUDIES, THE PURCHASE AND OTHER INFORMATION SOURCES HAVE BEEN REQUEST PACKAGE MUST CONTAIN A SIGNED STATEMENT FROM THE TECHNICAL OFFICER REPORT COULD FULFILL THE REQUIREMENT

## SERVICE ACTIVITIES





### SERVICE FOCAL POINTS & REGULATIONS

AIR FORCE -- AFPD 61-2

DR CHUCK CHATLYNNE -- DSN 225-3891

SAF/AQT

**1500 AIR FORCE PENTAGON** 

**WASHINGTON DC 20330-1500** 

**ARMY -- AR 70-45** 

MR BRYAN JOHNSON -- DSN 290-2410

ARMY RESEARCH LABORATORY

2800 POWDER MILL ROAD

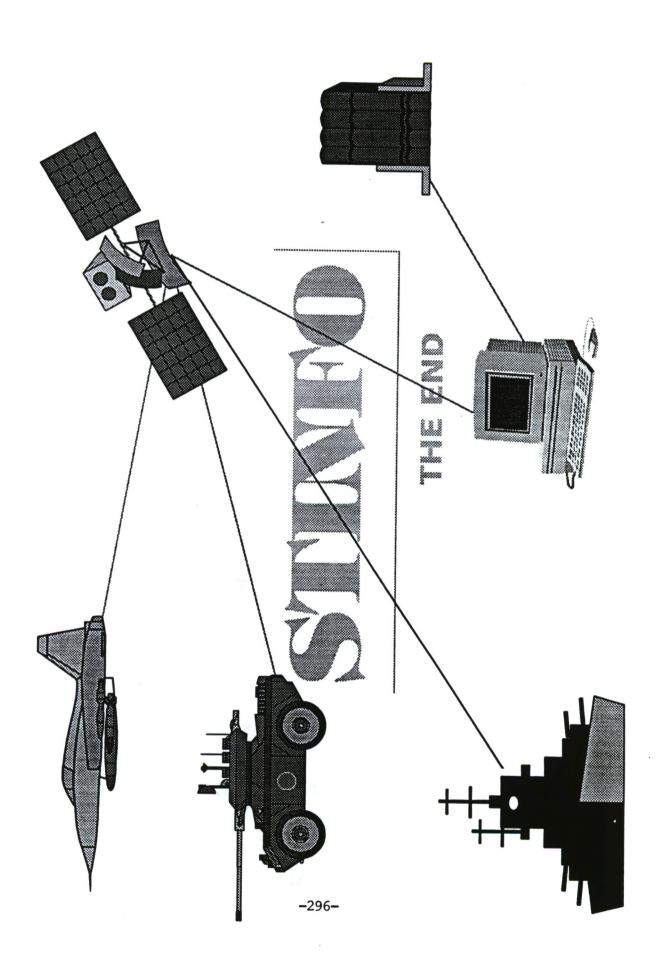
**ADELPHI MD 20783-1145** 

NAVY -- SECNAVINST 3900.43A

DR DAVID WOODS -- DSN 226-5991 OFFICE OF NAVAL RESEARCH

800 QUINCY STREET

**ARLINGTON VA 22217-5000** 



### Special Libraries Associations Military Librarians Division

Military Librarians Workshop Executive Board Meeting Minutes Monday, 15 Nov 1993 Albuquerque, NM

### Call To Order

The Executive Board of the Military Librarians Workshop met on 15 Nov 1993 at the Old Town Sheraton Hotel in Albuquerque, NM.

The meeting was called to order by the Chair, Gretchen Cheung from College militarie royal de Saint-Jean. In attendance were: Barbara Newton, Chairman of the 37th Military Librarians Workshop and Lee R. McLaughlin, Social Chairman, both from the host library Phillips Laboratories; Judy C. Neff, Representative from the Rio Grande Special Libraries, co-host of the 37th MLW; Carolyn Ray from Wright Laboratory, Chair of the Military Librarians Division; Jean Bannister from Redstone Scientific Information Center, Sec/Treas of the Military Librarians Workshop/Division; Representative from the USAF Library Program Annette Gohlke; Representative from Navy Kathleen J. Wright from the Naval Ocean Systems Center; Representative from DOD Alice Cranor from the Defense Intelligence Agency; Representative from the Army Louise Nyce from the Pentagon Library; Parliamentarian MLW Normand L. Varieur from the U.S. Army ARDEC (retired); Host MLW-39 Marcia Hanna from the Defense Technical Information Center; Bulletin Chairman Nellie Moffitt from Wright-Patterson AFB; Bonnie Klein, DTIC.

### Approval Of Agenda And Minutes

The Agenda was presented by the Chair and approved by the Board. The Minutes of the 30 Mar 1993 Executive Board meeting were reviewed by the Chair, Gretchen Cheung.

### Treasurer's Report

The financial report of the Military Librarians Workshop was read by Jean Bannister, Treasurer.

Bank Balance on 26 Mar 1993

**Expenses** 

for 37th MLW Ex Bd

for CEU Credits

\$328.78

\$150.00

Income

from Interest

\$101.18

Bank balance on 13 Nov 1993

\$8744.26

\$9121.86

The report was approved.

### • MLW 37th Program:

Barbara Newton announced a change in the program. The Welcome would be given by the Commander of the installation rather than the Deputy Commander. The gift to the attendees will be a cookbook written by a local author. Profits from the cookbook will go to a local charity. If the weather becomes bad, the money for the tour will be refunded to those signed up. Observations of the host site on the registration procedure: 1) only 58 MLD members registered, 2) process of sending out invitations is very labor intensive, 3) procedures manual is not clear on prioritizing invitations within services, and 4) should have a date for late registering.

Judy Neff from the Rio Grande SLA expressed their appreciation for being asked to participate in the workshop.

Normand Varieur suggested that a form for invitations might be included in the Procedures Manual.

### CEU Credits

Gretchen announced the CEU credit forms will be mailed out later. The Treasurer has forwarded the \$150 fee to SLA HQ.

### Procedures Manual

Norman Varieur presented to the Board the adopted and approved 7 Feb 1990 Procedures Manual. Changes have to be approved by the Executive Board as well as the SLA/MLD. The appendix may be changed at any time without having to amend the Manual. Motion was made by Annette Gohlke and seconded by Kathy Wright to accept the revised Nov 1993 Procedures Manual.

### MLW Anniversary Brochure

Marsha Hanna distributed a draft copy of the MLW history as written by William Palmer. A contract was written with the committee agreeing to pay Mr. Palmer \$500 at the start and upon completion of the history another \$500. Marsha Hanna made the recommendation to accept the completed history and pay the second \$500. Alice Cranor made the motion to accept and pay the fee with Carolyn Ray seconding the motion.

The Board discussed how to distribute the completed history to the members. Gretchen Cheung recommended the committee study the different options available and come back to the board with a proposal on how to publish and distribute. The committee will report back at the spring Board Meeting with its recommendations.

### MLW-38th Announcements

In the absence of Sybil Bullock, the Director of Redstone Scientific Information Center, Jean Bannister extended the invitation to come to Huntsville for the 38th Workshop. The Workshop will be held 14 Nov 1994 at the Huntsville Hilton. The theme of the meeting will be "Re-Inventing Libraries. Change and Challenges." Handouts presented to the board from RBIC: 1) invitation brochure, 2) hotel facilities accommodations information, and 3) speakers and topics information. Suggestions for speakers were Dr. Peter Benge, Margaret F. Stieg, and Herb White. A topic suggested was "collaboratories." This is a system to create integrated, tool-oriented computing and communications systems to support scientific collaboration.

### Future Workshops

MLW-39 1995, DOD. Marsha Hanna stated that the Defense Technical Information Center had a problem with hosting the 39th workshop. DTIC will be celebrating their 50th Anniversary that year and the DTIC annual conference is held the month before the MLW. Marsha had three options for the board to consider: 1) exchange years with someone, 2) hold the MLW in the spring of 1996, or 3) not be responsible for MLW in 1995.

The Board decided to seek another host for 1995.

MLW-40 1996, Navy. Kathy Wright said Stennis Space Center in Bay St. Louis, MO, cannot hold the MLW. She has asked the Marine Corp University at Quantico, VA, if they would be responsible.

MLW-41 1997, Air Force. Annette Gohlke said they could not hold the workshop on the west coast but Carolyn Ray at Wright Pat had agreed to be the host.

MLW-42 1998, Army. Louise Nyce said she had not asked anyone but she would suggest that the National Defense University be responsible.

### MLW Invitation Lists

Gretchen Cheung started the discussion with the background history of the MLW, invitations, quotas, and the role of the service representatives. The invitations from the service representatives had served as the vehicle for the librarians to have official approval to attend meetings. There had never been any problem even with the quotas because any MLD member was free to register to attend. The service representatives do a very good job of marketing the workshop for the Executive Board. Norman Varieur recommended the quota system be eliminated since the Host of the workshop did not adhere to the number. The motion was made by Kathy Wright and seconded by Alice Cranor to eliminate service quotas for invitations to the MLW.

A survey of the SLA/MLD membership was done to select the best time of the year to hold the workshop. Gretchen Cheung stated that the results of the survey did not show conclusive results of the best time. After a discussion period by the board, Annette Gohlke made the motion to keep the date with the first quarter of the fiscal year. Motion was seconded by Kathy Wright.

### Bylaws

Gretchen Cheung read Section 8 of the bylaws which deals with the MLW. There is no mention of the Canadian librarians. After discussing the issue, the Executive Board decided that Section B would have to be changed. The Bylaws will have to go back to committee to be resubmitted to the SLA/MLD and the SLA for approval.

### Executive Board Members

The Canadian representative's term has expired. Gretchen Cheung agreed to be nominated for a second term.

The MLD Chair appointed Normand Varieur to be the MLW archivist.

The MLD Chair will appoint the Army Representative. Louise Nyce agreed to be nominated.

### **Executive Board Comments**

Gretchen Cheung will arrange with the host site to have the winter Board Meeting held in Huntsville, AL.

As there was no new business the Executive Board was adjourned.

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### THIRTY-SEVENTH MILITARY LIBRARIANS WORKSHOP NOVEMBER 15-18, 1993 — ALBUQUERQUE, NEW MEXICO

### **Program**

### Monday, 15 November

- 2 pm 7 pm REGISTRATION
- 4 pm 6 pm **BOARD MEETING**
- 7 pm 9 pm SERVICE MEETINGS



CHARLES E. "CHUCK" SPATH

### Tuesday, 16 November

- 8 am 8:30 am WELCOME
  - Charles E. "Chuck" Spath, Special Assistant to the Office of the Governor State of New Mexico



GRETCHEN CHEUNG

- Vincent E. Griego, President Albuquerque City Council
- Gretchen Cheung, Chair Military Librarians Workshop
- Barbara Newton. Host Phillips Laboratory
- Judy Neff, Host Rio Grande Chapter, SLA
- Marjorie Hlava, President, ASIS



COLONEL EDWARD S. TOOLEY

8:30 am - 9 am

### WELCOME ADDRESS

Colonel Edward S. Tooley Commander, 377th Air Base Wing Supt Group Kirtland AFB, New Mexico

- Dr. R. Earl Good
   Deputy Commander
   Phillips Laboratory
   Kirtland AFB, New Mexico
- 9 am 10:15 am
   KEYNOTE ADDRESS
  - □ "Emerging
    Technologies"

    Paul Mosher
    Vice Provost and
    Director of Libraries
    University of
    Pennsylvania
- 10:15 am 10:30 am BREAK
- 10:30 am 11:30 am GUEST SPEAKERS
  - □ "New Approaches to Training Information Professionals, U.S. vs. Eastern Europe"

    José-Marie Griffiths

    Past President, ASIS

    University of Tennessee
- 11:30 am 12:15 pm
  - □ "FEDLINK Update"

    Joseph Price

    Acting Executive Director

    FLICC
- 12:30 pm 1:30 pm LUNCH
- 1:30 pm 2:15 pm GUEST SPEAKERS
  - □ "International Information Research (Space)"
    Walt Blados, NASA
  - □ **"Knowledge Diffusion Project"**Tom Pinelli, NASA



PAUL MOSHER



JOSÉ-MARIE GRIFFITHS

- 2:45 pm 3 pm BREAK
- 3 pm 4 pm WORKSHOPS

□ Workshop A:

"Federal Library Contracting"

David Hiebert

Library Contract Monitor

Arnold Engineering Development Center

Gay Goethert AEDC/HQ

Harry Needleman Library Coordinator NASA—STI

□ Workshop B:

"The Virtual Library"

Murray L. Bradley

Monitor

Naval Research Laboratory

- 4 pm 5 pm WORKSHOPS
  - □ Workshop C:
    "The Virtual Library"
    Rod Atkinson
    Monitor
    Naval Research Laboratory
  - □ Workshop D:

    "Federal Library Contracting"

    See Workshop A description
- 6 pm 9 pm
  DINNER & ENTERTAINMENT
  □ Indian Pueblo Cultural Center

### Wednesday, 17 November

8 am - 9:30 am
 OVERVIEW

☐ "Developments in Position Classification Standards"

**United States** 

Raymond Crosby, Consultant

University of Florida

Canada

Cathy E. Murphy, Chief Librarian

Canadian Forces College

- 9:30 am 9:45 am BREAK
- 9:45 am 11:30 am SESSION
  - 'Factor Evaluation Method for Standards Development - Position Descriptions"

Raymond Crosby, Consultant

University of Florida

- 11:30 am 12:00 pm SESSION WRAP-UP
- 12 pm 1:15 pm LUNCHEON & SPEAKER

- Dr. Arthur H. Guenther
   NM Governor's Science
   Advisor & Sandia
   National Laboratory
- 1:30 pm 2:30 pm GUEST SPEAKER
  - □ "Access Russia"

    Marjorie Hlava, President
    Access Innovations, Inc.
- 2:30 pm 2:45 pm BREAK
- 2:45 pm 4:15 pm PANEL DISCUSSION

Alliance of NM
Rick Luce, LANL
Harry Llull, UNM
Sally Landenberger, SNL
Betty Reynolds, NM Tech
Jeanne Howard, NM State

**Library Service** 





### Barbara Newton, Phillips Lab Marilyn von Seggern, Washington State

- 5 pm 7 pm RECEPTION WITH CASH BAR
- 7 pm

**DUTCH TREAT DINNERS** 

### Thursday, 18 November

7:30 am - 9 am

ARMED FORCES SERVICES BREAKFAST

□ Service Presentations Air Force, Army, DoD, Navy
& Canadian Department of Defence
Gretchen Cheung, Chair
Military Librarians Workshop

- 9 am 9:15 am
   BREAK
- 9:15 am 11 am

PANEL DISCUSSION

□ "Relationships Between Libraries & New Information Entities"

Chair Kurt Molholm, DTIC

Members Norman Lee, NAIC/DXI

Keith M<sup>c</sup>Connelly, DISA/CIM Pat M<sup>c</sup>Williams, STINFO-AFMC

- 11 am 12 pm
   MLD BUSINESS MEETING & CONFERENCE WRAP-UP
- 12 pm 1 pm

  ACADEMIC AND RESEARCH LIBRARIAN'S LUNCHEON

  □ Bob Lane, Coordinator
- 12:15 pm 1:30 pm TOUR/VIDEO PRESENTATION

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### WORKSHOP COMMITTEES

**Local Arrangements** Committee Lee McLaughlin, Chair Vicky Agee Linda Aldridge **Mary Compton Donna Cromer** Anne Deurell **Peg Fletcher Eleanor Gildersleeve Marie Harper** Marjorie Hlava Jolaine Lamb Stephanie Montoya Sarah Morley **Margaret Morris Judy Neff Betty Reynolds** Sandy Spurlock **Andrea Testi** 

Phillips Laboratory Technical Library Staff

PROGRAM COMMITTEE Barbara Newton Sandy Spurlock

PROTOCOL ADVISOR Patricia Whited

TECHNICAL ADVISOR Roger Coffin



LEE MCLAUGHLIN, CHAIR

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### Rod Atkinson

Rod Atkinson is the Electronic Resources Coordinator at Ruth H. Library Hooker and Technical Information Center, Naval Research Laboratory, Washington, DC. He has given numerous presentations at professional conferences on CD-ROMs, networking, and the Internet and has authored several articles on these subjects. Recently, he was featured on a Voice of America teleconference/radio broadcast where he was interviewed by a group of Librarians in South Africa interested in the Internet.

Rod Atkinson serves on the internet Planning Group for FEDLINK and as the Network Technical Representative for the Technical Information Division at NRL. He received his Master's in Library Science from Catholic University, Washington, DC, and is currently pursing his Master's in Telecommunications at George Washington University, Washington, DC. He can be contacted at: Naval Research Laboratory; Code 5220; Washington, DC 20375-5335. Phone: 202-404-8695; Fax: 202-767-3352; E-Mail: Rod@Library.NRL.Navy.Mil.

### Walter Blados

Walter Blados features nearly 15 years experience in domestic and international information management as well as nearly 20 years in leadership

roles in the U.S. Air Force and U.S. Navy. Today Mr. Blados serves as a Program Manager in InternationalBranch of the NASA Scientific and Technical Information (STI) Program. He is responsible for liaison with the North Atlantic Treaty Organization's Advisory Group for Aerospace Research and Development (NATO/AGARD) and the pursuit of information exchange possibilities with Russia. During his 11-year tenure as Deputy Director Scientific and Technical Information for the Office of the Secretary of the Air Force, Mr. Blados served in several key positions with the NATO/AGARD Technical Information Panel. In 1987. he was elected Panel Chairman, Mr. Blados holds a B.A. in Philosophy and an M.A. in Public Administration, and he is a candidate for graduate-level certification in information resources management.

### Murray L. Bradley

Mr. Bradley is currently Head of the Research Reports Section of the Ruth H. Hooker Library and Technical Information Center, Naval Research Laboratory (NRL), Washington, D.C. He has held adminstrative positions in Navy Libraries for over twenty years, in both academic and scientific settings. Presently he has oversight and responsibility for the optical disk projects, an operation to transfer over 130,000 paper documents onto optical disks. His presentation at the 14th National Online Meeting May 4 - 6,

1993 with Doris R. Folen, is currently available. ("Retrieval of Optical Images Using Cuadra Star and Genesys" [with], Proceedings of the Fourteenth National, New York, NY, May 4-6, 1993, Learned Information, Inc., Medford, NJ, pp 48-49). In October 1993, he participated in the User's Forum of the Center for Naval Analysis Imaging and Retrieval Seminar. Mr. Bradley holds a Master of Science in Library Science from the Catholic University of America and a Master of Science in Business Administration from Bryant College.

### Ray Crosby

Ray Crosby is a Management Consultant who has been involved in Federal personnel work since 1959. He worked as a Position Classification Specialist and then as a supervisor at a variety of Army installations prior to becoming an Occupational Specialist (Standards Writer) at OPM and authored several classification and qualification standards for professional occupations. He participated in the start-up of the executive assignment system and became a key supervisor in the OPM Bureau of Executive Personnel.

Ray left OPM in 1977 and started his own consulting firm. During the past sixteen years he has participated in a wide variety of position classification, personnel management, and manpower management studies for many government agencies; developed and conducted personnel management training courses; and written several Government-wide classification and qualification standards as well as several single-

agency occupational standards and guides (for Agriculture, Health and Human Services, Veterans Affairs, the Library of Congress, Interior, the Office of Science and Technology, and Transportation). Ray served as a federal personnel expert and resource to the Personnel Topic Committee for the 1991 White House Conference on Library and Information Services and then as a Delegate-at-Large at the White House Conference. Among other Federal personnel activities, he is currently working as a consultant to the FLICC Personnel Working Group.

### ■ Gay D. Goethert

Mrs. Gay Goethert is currently Library Supervisor of the Arnold Engineering Development Center (AEDC) Technical Library, Arnold Air Force Base, TN. She received her B.S. Degree from Middle Tennessee State University in 1971, and M.L.S. from George Peabody College in 1972. She is currently with SSI Services, Inc. She is a member of the Special Libraries Association and the Tennessee Library Association.

### ■ Vincent E. Griego

Vincent E. Griego began his public service in December 1979, when he was elected to represent the North Valley as the District 2 City Councillor. In an unopposed race he was reelected in 1982, and in 1987 and 1991 he was again reelected by overwhelming majorities. During his tenure on the City Council, Councillor Griego has been elected by his colleagues twice as President of the Council in which capacity he is currently serving. He has chaired the

Council's Finance and Government Operations Committee three times and each time was appointed to lead the Council in adopting a balanced budget. In addition, he has been the Chair of the Human Resources and Public Works Committee and a member of the Land Use, Planning, and Zoning Committee, the Internal Operations Committee, and the Intergovernmental and Legislative Relations Committee. In Councillor Griego was voted by the Council to the Board of the New Mexico Municipal League where he served until 1992 when we was elected as the Treasurer of the League. He has been appointed to the Nominating, Resolutions. Budget. Taxation Human and Revenue. Resource. and Community Governmental Affairs Committees of the League. He also was a member of the National League of cities Human Development Steering Committee.

A graduate of the University of Albuquerque in Business Administration, Councillor Griego is employed as the Director of the County Shops, the Bernalillo County vehicle maintenance operation. He has the distinction of having been born in the historic Old Town area of Albuquerque. His entire life has been spent addressing the needs of the people of Albuquerque, the District he represents, and the entire city.

### José-Marie Griffiths

José-Marie Griffiths worked in a jointly sponsored position at the University of Tennessee and Martin Marietta Energy Systems as Distinguished Professor and Collaborating Scientist in Information Science. She is Dean of the Graduate School of Library and Information Science and Director of the Center of Information Studies at the University. She has a B.Sc. in Physics and a Ph.D. in Information Science, both from the University of London (England).

In recognition of her work, Dr. Griffiths has been the recipient of several honors including the Larrow Distinguished Lectureship. American Society of Information Science's Research Award, the OCLC Distinguished Lectureship. Society Fellowship in Information Science, Research Fellowship Systems Science at the City University (London), and an Honorary Fellowship in Statistics and Computer Science at University College, London. In 1992 she was elected President of the American Society for Information Science.

Professor Griffiths has written over 150 books, technical reports, and articles and given over 250 formal presentations, keynote addresses, and workshops. She has also directed 17 studies of statewide library and information services in 14 states. Recent projects have included the development of the Cost Finding for Records Management Activities manual for ARMA International: and assessment of scientific and technical information dissemination in the U.S. for the National Science Foundation: cost and benefit modeling alternative text retrieval systems in support of all research activities of the IRS; development of the Manual of Performance Indicators for Public <u>Libraries in the U.K.</u> for the British Library; and development of the <u>Manual for Evaluating Information</u> <u>Centers and Services</u> for NATO, AGARD.

### Arthur H. Guenther

Dr. Arthur H. Guenther is currently the Science Advisor to the Governor of the State of New Mexico and also serves as the Manager for Special Projects. Scientific Advisor for Laboratory Development, National Laboratories in Albuquerque. NM. His principal activities include liaison with the Air Force Phillips Laboratory on the Strategic Alliance, Leadership in Technology-Based **Economic Development and Technical** Education with the State of New Mexico, key member of the Governor's Task Force on Air Force Space Systems Division relocation, and the Task Force's Space New Mexico initiative, interacting with NASA and commercial entities to promote New Mexico's extensive capability in this area. Prior to his current position, he served for many years as Chief Scientist of the Air Force Weapons Laboratory and as Chief Scientist for Defense Research Applications Organization at Los Alamos National Laboratory. He continues his many professional and advisory roles with National and State Committees and Commissions with a heavy defense and technology transfer /commercialization emphasis, working closely with the New Mexican Congressional Delegation.

### David M. Hiebert

David Hiebert has been Chief of the

History Office, Arnold Engineering Center. Arnold Air Force Base, since 1987. Before coming to Arnold, he was Staff Historian at Headquarters, Air Force Reserve, Robins Air Force Base. He has taught history at Hanover College, Hanover, IN; Indiana University in Bloomington, IN: and the University of Kansas. He has taught courses in Aerospace Research and Development since 1945: Modern German Social History: War and Social Change in the Twentieth Century; and Western Europe Since 1500. He served as Editorial Assistant for the American Historical Review from 1980 - 1982.

Dr. Hiebert received a B.A. in German and an M.A in history from the University of Kansas, and a Ph.D. in history from Indiana University. He has presented a large number of papers that focus on psychological and social German history. Honors include the Air Force Systems Command Nominee for the Gill Robb Wilson Trophy for Most Outstanding Contribution to National Defense in Arts & Letters (1990); Graduate School Research Fellowship, Indiana University (1985); Research Fellowship, Institut fur Europsische Geschichte. Main, West Germany (1982-84); and the Susan O'Kell Memorial Award for the Outstanding Associate Director in History, Indiana University (1978-79).

### Marjorie Hlava

Marjorie Hlava is the founder and President of Access Innovations, Inc., an international database and information services company, headquartered in Albuquerque, NM.

Their clients include national and international corporations, small business. association, government offices and departments. The Access staff are responsible for the creation and/or development of 200 online files, many commercially available. Ms. Hlava's consulting areas have included project design, work flow analysis, project administration, database design, software development, and problem solving in all areas of corporate activity. Marjorie is a frequent speaker on database construction, has contributed to over 100 publications, and since 1992 has concentrated much of her energy to bringing Russian literature and related information services to local. regional, and national levels. She works actively in support information industry-related professional organizations and issues, is a member of the board of Directors NISO (National Information Standards Organization), and in October of 1993 was inaugurated as the President of the American Society for Information Science (ASIS).

### Kurt N. Molholm

Kurt N. Molholm became the Administrator of the Defense Technical Information Center (DTIC) on 3 1985. DTIC February is the Department of Defense's managing agency for technical and management information, Information Analysis Center support, technical library support of the Defense Scientific and Technical Information Program (STIP).

A member of the Senior Executive Service, Mr. Molholm has a B.S.

degree in Business Administration from the University of Oregon, and a MSA in Administration from George Washington University and is a graduate of the Industrial College of the Armed Forces. He has been awarded both the DLA Exceptional Civilian Service and the DLA Meritorious Civilian Service Medals and was recognized by the William A. Jump Memorial Foundation Exemplary Public Service. He is active in the Scientific and Technical Information community. He Treasurer and President Elect of the National Federation of Abstract and Information Services (NFAIS). Chairman of the Commerce, Energy, NASA, NLM, and Defense Information (CENDI) Group, and a former member of NATO's Advisory Group Aerospace Research and Development (AGARD) Technical Information Panel. A member of the Federal Library and Information Center Committee (FLICC), he serves as Vice Chairman of FLICC's Executive Board and Chairs its Policy Working Group.

### Paul Mosher

Paul Mosher is Vice Provost and Director of Libraries at the University of Pennsylvania. He earned a B.A. degree from Portland State University, and M.A. and Ph.D. degrees from the University California. Berkeley. Honors include Visiting Scholar at the University of Nebraska Libraries; the Blackwell North America Scholarship Award for the Best Article in the Area of Library Resources: CLR Senior Fellow at the UCLA Graduate School of Library and Information Sciences: a Fulbright-Hayes Senior Research Scholarship (Italy); and the University

of California, Berkeley, Italian-American Traveling Fellowship.

Dr. Mosher's past positions include a variety of responsibilities at Stanford University Libraries, the University of Washington, and the State of Oregon. His professional service includes many committee assignments and chairmanships for the American Library the Association Association. Research Libraries, the Research Libraries Group, and the American Association of Universities. He has served on various NEH and Office of Education Review Panels and has presented seminars and lectures in New Zealand, Puerto Rico, and Sweden. He has also provided consultation services to eleven university library systems, several state libraries, and a number of other organizations. He is author of many journal articles, reports, and book chapters on a wide range of topics relating to collection development and automation in libraries.

### Harry Needleman

Mr. Needleman is currently with the NASA Scientific and Technical Information Program as the NASA Library Coordinator through a NASA contract with RMS Associates. In this capacity Mr. Needleman serves as a liaison for the NASA center libraries, coordinates agency-wide library projects, and provides functional support to the Aerospace Research Information Network (ARIN), NASA'S integrated library management system. From 1987-1992, he held contract positions as Project Manager with the Goddard Space Flight Center and NASA Headquarters Libraries. Mr.

Needleman received his MLS from Southern Connecticut State College in 1978.

### Thomas E. Pinelli

Dr. Thomas E. Pinelli is Assistant to the Chief, Research Information and Applications Division, at the NASA Langley Research Center in Hampton, since August 1988. In this position, Dr. Pinelli serves as the Center's resource person and principal advisor regarding scientific and technical information (STI) policy formulation analysis, and program assessment and evaluation. He also serves as the director of the NASA/DoD Aerospace Knowledge Diffusion Research Project.

Since 1985, he has served Associate Editor for Research of Technical Communication. Journal of the Society for Technical Communication. In January 1991, he was named the first recipient of the George Mandel Memorial Award by the Aerospace Division of the Special Libraries Association. He received the 1991 "Doctoral Dissertation Award" the American Society for Information Science. In 1993, he was selected to chair the National Information Standards Organization's (NISO) Subcommittee to revise NISO Z39.18, "Guidelines for Format and Production of Scientific and Technical Reports."

Dr. Pinelli graduated in 1970 from Old Dominion University. He received a master of science degree in industrial education from Clemson University in 1972, a master of science degree in administration from Old Dominion University in 1976, a master's degree in public administration from Golden Gate University in 1978, and a master of science degree in library and information science from the Catholic University of America in 1983. In 1990, he received a Ph.D. in library and information science at Indiana University.

He is a member of the American Institute of Aeronautics Astronautics (AISS), the American Society for Engineering Education (ASEE), the American Society for Information Science (ASIS). the Society for Technical Communication (STC), and the Special Libraries Association (SLA). He is a member of the ASIS Public Affairs Committee and the SLA Research Committee. He is a member of the ASIS Public Affairs Committee and the SLA Research Committee. He is the chair of the AIAA technical information technical committee.

### Joseph W. Price

Joseph Price joined the Library of Congress in 1972 and has served there as Chief of the Science and Technology Division since 1981. He has also served as acting executive director of FLICC since the temporary reassignment of Mary Berhaus Levering to the Library of Congress Copyright Office. He is a veteran of over 20 years experience with the Federal library and information center community. He received a B.A. degree from Sam Houston University, an M.L.S. degree from the University of Texas at Austin, and advanced degrees from American University in technology management and

operations research. Before coming to the Library of Congress, Mr. Price served as the U.S. Air Force officer responsible for library systems at Air Force Cambridge Research Laboratories in Bedford, MA.

In his current capacity at the LC, he oversees a broad range of activities including science and technology reference, abstracting and indexing. publishing (including CD-ROM), and collection development. He directed the LC's Optical Disk Pilot Program and acted as automation officer for Constituent Services. He has also represented the LC in activities of the American Libraries Association, the National Commission of Libraries and Information Science, the Council on Library Resources, the National Federation of Abstracting Indexing Services, the International Federation of Library Associations and Institutions, and UNESCO.

### ■ Charles E. "Chuck" Spath

Charles E. "Chuck" Spath joined the Office of the Governor of New Mexico as a Special Assistant in October 1991. He is on loan under the provisions of the Intergovernmental Personnel Act from the U.S. Department of Energy where he served as Director, Office of Intergovernmental and Media Affairs.

Spath first came to New Mexico in 1967 as Director of the U.S. Civil Service Commission in Albuquerque (now the Office of Personnel Management). In early 1970, he moved to the U.S. Geological Survey and then served as State Personnel

Director for the state of New Mexico until 1973 at which time he became Personnel Director for the U.S. Atomic Energy Commission in Albuquerque. Following that, he served as Director of Training and Executive Development for the Department of Energy and its predecessor agencies, then moved on to top management positions in managing scientific and technical information.

Spath has served as President of the New Mexico and Tennessee chapters of the American Society of Public Administration, has served on the ASPA National Council, and currently serves on the New Mexico Council. He also served as President of the American Society of Information Science, the Public Personnel Association, and the American Society for Personnel Administration. He is a former Junior High and High School teacher in Colorado and Alaska. He taught courses in political science, public administration, and personnel administration at the University of New Mexico, the University of Albuquerque, the College of Santa Fe, and the University of Tennessee.

He received his bachelors degree from the University of Northern Colorado in business Education in 1957 and his master's in Public Administration from the University of New Mexico in 1970.

### ■ Colonel Edward S. Tooley

Colonel Edward S. Tooley is commander of the 377th Support Group, Kirtland Air Force Base, New Mexico. The 377th Support is organizationally aligned under the 377th Air Base Wing, which is a major unit of Air Force Materiel Command. Colonel Tooley received his

Air Force commission and a B.S. degree in engineering sciences from the U.S. Air Force Academy in 1966. He received a master's degree in nuclear engineering at the Air Force Institute of Technology (AFIT) in 1975. After earning his master's degree from AFIT at Wright-Patterson AFB, OH, in 1975, Colonel Tooley remained at Wright-Patterson in operational duties as a CT-39 instructor, flight examiner, and chief scheduler for Detachment 2, 1401st Military Airlift Squadron. From 1976 to 1979 he was assigned to the Nuclear Criteria Group Secretariat at the Air Force Weapons Laboratory at Kirtland AFB. Following graduation from Air Command and Staff College at Maxwell AFB, AL, in 1980, he returned to flying duties in the C-141 at Norton AFB, CA. During this tour he served as an instructor pilot, executive assistant operations officer, operations officer, and finally as commander of the 15th Military Airlift Squadron. In 1984 Colonel Toolev served as chief of the Aircrew Resource Management Division at MAC headquarters at Scott AFB, IL. He also served as senior executive officer for MAC's Deputy Chief of Staff for Operations. He was then sent to Washington, DC, as a senior research at the National Defense University. While there he attended the Industrial College of the Armed Forces. In 1987 he was assigned to the Defense Nuclear Agency in Washington, DC as Assistant Director for Nuclear Operations. In June of 1990 he was assigned as Vice Commander of the 1606th Air Base Wing at Kirtland AFB. He became Vice Commander of the 542nd Crew Training Wing on October 1, 1991. He assumed his current position on January 1, 1993. Colonel Tooley is a command pilot with more

than 4,800 flying hours, including 650 combat hours. His decorations include the Bronze Star, Defense Superior Service Medal, Meritorious Service Medal with one oak leaf cluster, and the Air Medal with one oak leaf cluster.

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## **List of Attendees**

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## 37th MILITARY LIBRARIANS WORKSHOP EVALUATION SHEET

		Low		High	
1.	How well were the stated workshop objectives met?	1	2	3	4
2.	How well were your individual objectives met?	1	2	3	4
3.	How well suited was the subject matter?	1	2	3	4
4.	How effective were the speakers?	1	2	3	4
5.	How well were your advance planning needs and registration handled?	1	2	3	4
6.	How well did the hotel and convention facilities meet your needs?	1	2	3	4
7.	How would you rate the non-workshop activities (tours, etc.)?	1	2	3	4
8.	General Comments				
9.	Workshop Strengths				
10.	Workshop Weaknesses				
Sign	ature Date				